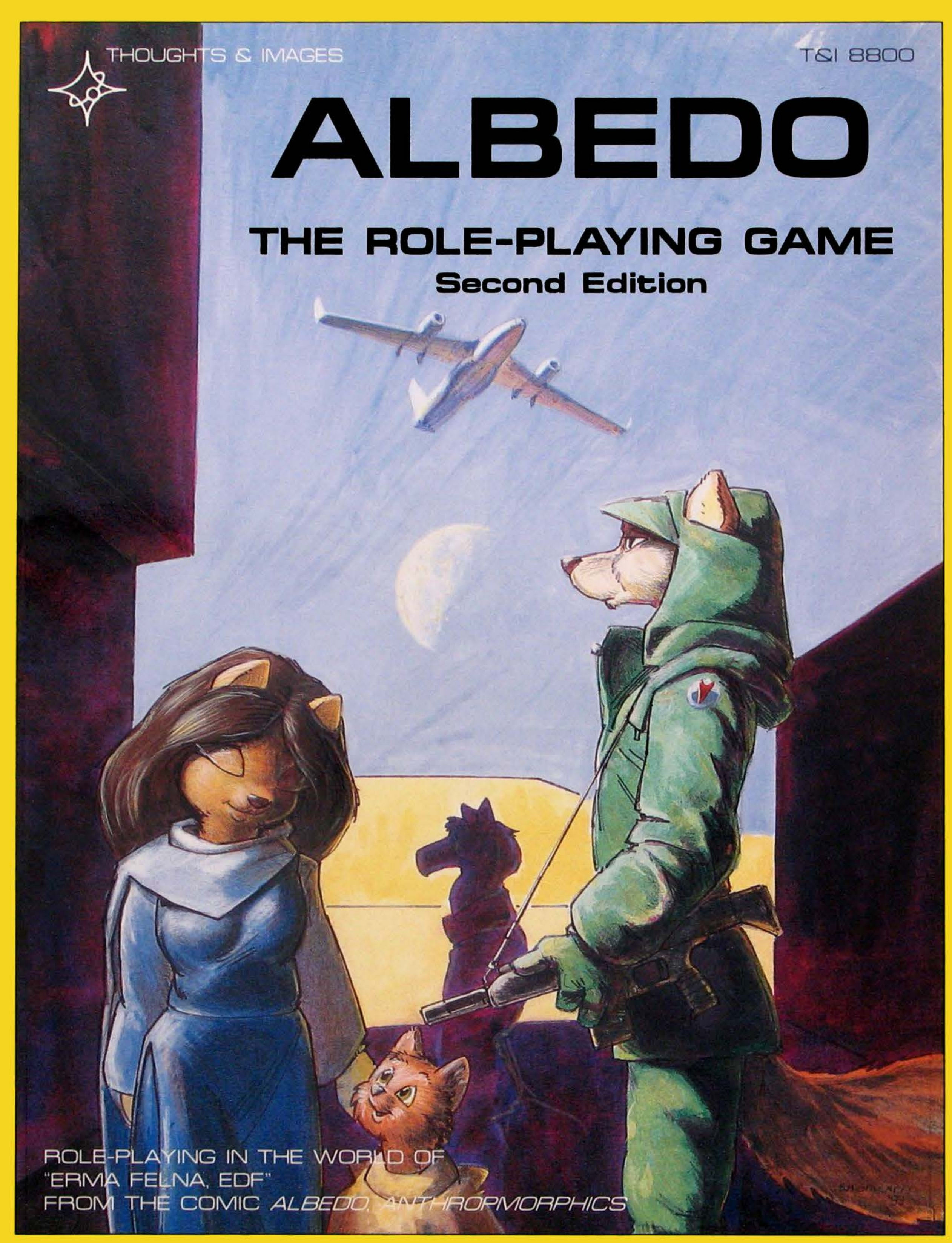
THOUGHTS & IMAGES

T&I 8800

ALBEDO

THE ROLE-PLAYING GAME

Second Edition



ROLE-PLAYING IN THE WORLD OF
"ERMA FELNA, EDF"
FROM THE COMIC *ALBEDO, ANTHROPMORPHICS*

ALBEDO

THE ROLE-PLAYING GAME

Second Edition

Craig Hilton and Paul Kidd

THOUGHTS & IMAGES

CHESSEX

Credits

Second Edition Development: Craig Hilton and Paul Kidd
Original Game Design: Paul Kidd
Art: Steve Gallacci
Design and Layout: Janice Sellers
Editor: Janice Sellers
Reader: Hilary Ayer

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This product is based on the comic book *Albedo, Anthromorphics* and the stories "Erma Felna, E.D.F." and "Birthright", ©Steven A. Gallacci.

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ALBEDO

THE ROLE-PLAYING GAME

ACKNOWLEDGMENTS

With much gratitude to all those fans who have held this game in such affection that they demanded a second edition!

My heartfelt thanks to Rory Deutsch, whose constant assistance resulted in the development of the game's basic systems. How well I remember him as he leapt gaily up into the cockpit of his OKHA bomb, the rising sun glinting from his headband as he tossed his sake cup aside. (Aaah–and then there were those warm summer nights in Poona, when we would rub linseed oil into each other's knees . . .).

Thanks also to Stephen Curtis, who seems to have played more Albedo than any other person in the world, and for whom Craig wrote the "house rules" which have resulted in this second edition.

Paul Kidd
1993

FOREWORD

For those of you who are new to the concept, a role-playing game may be quite difficult to catch on to at first. Role-playing games have no winners or losers. They are played simply for the enjoyment of the exercise. A game will involve one or more players, each of whom creates an imaginary "**character**" which acts as a kind of alter ego, and whose adventures and misadventures will be guided by the will of its controlling player.

The game is presided over by an umpire (also called the referee). The umpire acts as a storyteller, presenting the players with problems and information, and adjudicating the results of the player characters' actions. A role-playing game thus becomes an ongoing story in which both the players and the umpire participate, the umpire creating the general framework and the player characters creating the action.

These rules are intended as a framework which will allow the umpire and players to simulate the adventures of their characters and the workings of the game environment. They are not intended to cover every possible eventuality. Umpires should feel free to improvise or adapt the rules to meet their particular needs.

INTRODUCTION

Despite any humorous preconceptions that you might have about "cute furry animals", Albedo is essentially a straightlaced game. Based on the dramatic and entertaining "Erma Felna" and "Birthright" comic strips by Steven A. Gallacci, the game is designed to allow players to adventure within the universe proposed by the "Erma Felna" scenario. As such, Albedo is entirely devoid of plasma zap guns and combat chain saws. It projects an alternative society which uses sensible technologies and social mechanics. The unique environment of Albedo governs the entire character of the game.

Albedo uses anthropomorphic animals as its stock inhabitants. In simpler terms, the science fiction environment of Albedo is inhabited by intelligent creatures descended from gene-modified terrestrial animals. These creatures (termed characters or "critters" for simplicity's sake) have humanoid characteristics. They walk erect, use tools, and reason very much like a human being. Critters come in a number of different species, which makes their society quite colorful and intriguing. There is a great variety within many species. Elements such as head hair and fur color can vary widely from creature to creature, adding still more variety to the types of characters available to the players.

In the great tradition of Aesop and George Orwell, animals in serious stories can be used as a means of showing more about ourselves. Animal characters can be very much more

than "just funny animals." In a role-playing game, animal characters can be much more fun to play, since they divorce the player from the known human roles which he would otherwise automatically play. We have found it very easy for players to identify themselves with animal characters, with the added bonus that you feel like you are something more than just a run-of-the-mill human.

Albedo endeavors to create a gaming environment which does not need great populations of gun-toting opponents to make an entertaining day's play. The best games make the players think hard, and occasionally breathe a sigh of relief. Solving a problem or making a successful rescue can be at least as exciting as sending imaginary opponents off to meet their noble ancestors.

Most importantly, these rules seek to provide a means of simulating inter-personal relations. While gunplay seems to form a major part of most role-playing systems, the astute will realize that having fun while playing a game does not mean rampaging about like a homicidal maniac. The best games are composed of interesting problems to solve, people to deal with and goals to achieve. A fight to the death is an awesome and terrifying experience. Treat it as such, and perhaps all of your games will be just that bit more enjoyable.

IT IS ESSENTIAL FOR ALL UMPIRES AND PLAYERS TO BE FAMILIAR WITH THE GAME'S BACKGROUND MATERIAL. PLAYERS SHOULD READ THE BACKGROUND HISTORY SECTION BEFORE ROLLING CHARACTERS OR COMMENCING PLAY.

DEFINITIONS

Area of Expertise: The ability, gained often by nonspecific experience, to perform some straightforward action or feat better than characters without this advantage. Examples of Areas of Expertise are Assessing Personality, Bargaining, Public Speaking, Repartee and Spotting. A character with an Area of Expertise is said to have expertise in that area. At a higher level, the character has great expertise in it, and at the highest level he has very great expertise.

Character: One of the dramatis personae of the story. A character may be role-played by the player (player character or PC) or the umpire (non-player character or NPC). It may also be a "harlequin" (see page 40).

Characteristic: A basic attribute of a character. The characteristics are Strength, Stamina, Manual Dexterity, Coordination, Reason, Intuition, Drive and Stability. All characters have these at a particular value. They are measured as a value from 3 to 17 (the average being 10).

Characteristic Challenge: A situation where a character is attempting some action or feat based on one of his characteristics and is interacting with someone else, comparing like with like. An example is a Strength challenge for arm wrestling. Strength Characteristic values for the two characters are compared, with relevant modifiers, to give the Chart Number.

Please note that when you are asked to compare one value with a second value, the second value will be subtracted from the first to yield the number which will be used to determine which column the player is to roll on.

Characteristic Check: A situation where a character is attempting some action or feat based on one of his characteristics. Examples of Characteristic Checks are a Strength check for lifting a heavy weight, a Coordination check for jumping over a fence, and a Reason check for remembering a friend's birthday. The Characteristic value is compared against the Difficulty value, with relevant modifiers, to give the Chart Number. A Characteristic Check is called for when a character is not interacting with another character or NPC.

Chart Number: The number reached after all the adding and subtracting. Check the Chart Number on the Comparison Chart to find the Success Number.

Comparison Chart: Readers will find that the rules often refer to a test of some characteristic or skill versus another value. The rules are here referring to a Characteristic Test rolled on the Comparison Chart, which may be found on page 10. This is the central working part of the game. For details on how to make a Characteristic Test, see page 31.

When rolling on the comparison chart, the dice are always rolled by the player who has initiated the test. Thus, if a character challenges another character to an arm wrestling match, the challenger will roll the dice.

Dice: Whenever dice are rolled, the player will be told the type of dice required for the roll in an abbreviated form. The first number in the abbreviated term is the number of dice to be rolled. The next term specifies the type of dice to be used for the dice roll in the form of a lower case "d" followed by the number of sides the required type of dice possesses. Thus 2d6 is the shorthand term for two six-sided dice. Most of the game operates through that familiar old workhorse, the six-sided die, which is the easiest and quickest to use. A six-sided die can be used to generate numbers between 1 and 2 (a roll of 1, 2 or 3 yields a result of **1**, and a roll of 4, 5 or 6 a result of **2**); and between 1 and 3 (i.e., as a d3). Simply halve the value rolled on the six-sided die, remembering to round fractions up to the next whole number.

Also appearing with the various abbreviations are the terms "+" and "-", with a required dice score for an event. A minus sign indicates that the player must roll the number shown or less on the dice in order for the specified event to come about. A plus sign indicates that he must roll the number shown or higher for the results to occur.

Thus, if the text were to ask a player to roll 2d6, with an event occurring on a 9-, then the player will roll two six-sided dice, with a resulting score of 9 or less causing the stated effect.

Dice roll modifiers: When a number is to be added to or subtracted from a dice roll, it is referred to as a dice roll modifier (DRM). Thus a -1 DRM means that the players will subtract one from the score of their dice roll result.

Difficulty: The rigor of an attempted action or feat, ranging from very simple to nigh on impossible, as measured by a number from 0 to 25 respectively. Average Difficulty is 10.

Fractional values: At various points during play, players may find themselves required to halve certain values. Fractions are always rounded to the nearest whole number (.5 rounds up).

Governor: The characteristic(s) associated with the Skill or Area of Expertise, whose value (or average of values) is used to help determine how capable the character is at that skill due to his innate abilities.

Player: The person who creates a character and plays it in the game. For the most part, players control the actions of their characters.

Result Grades: The degree by which the result succeeds or fails. Thus they are also called Success Grades and Failure Grades.

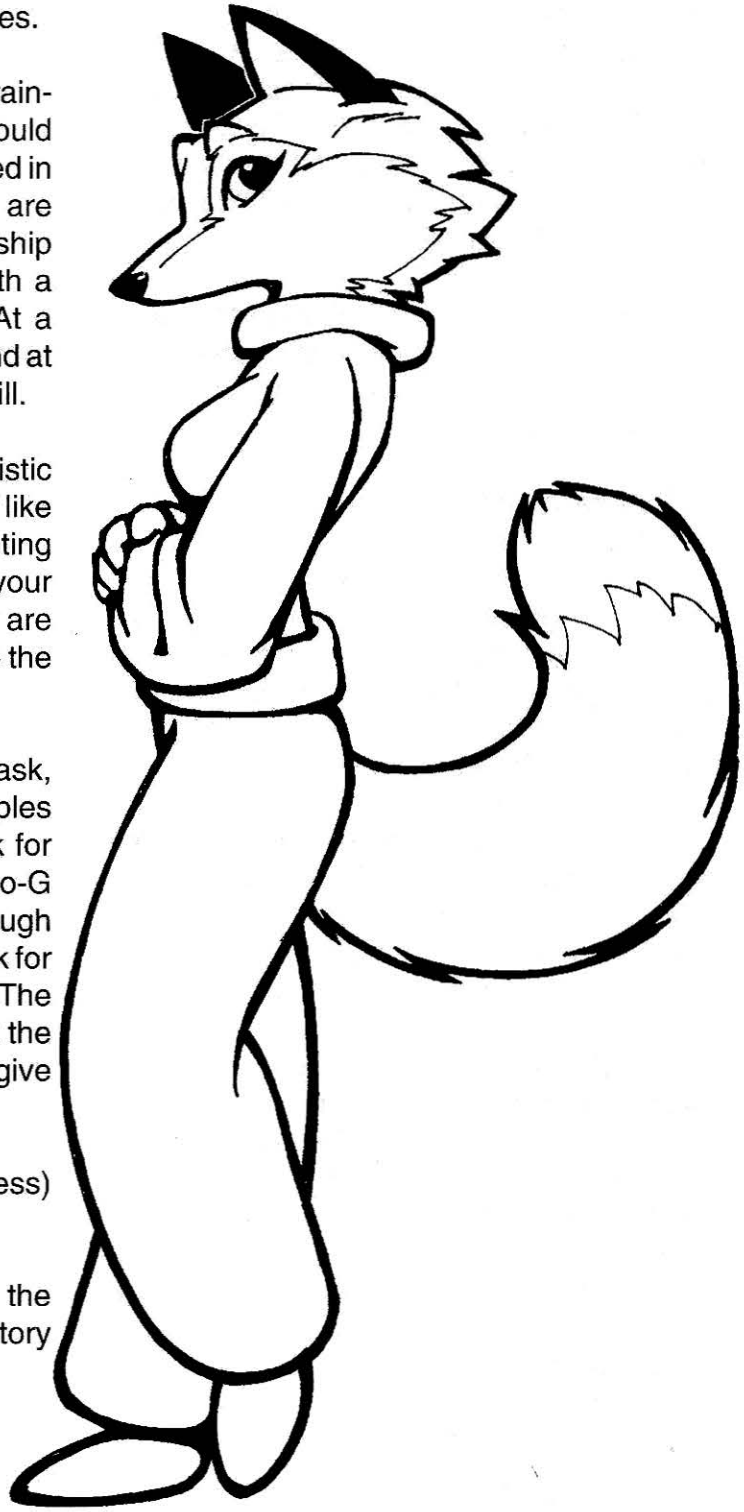
Skill: The ability, gained by specific training, to perform some action or feat which could be a barrier to characters normally unskilled in this particular area. Examples of Skills are Leadership, Climbing, Handguns, Starship Pilot and Administration. A character with a Skill is said to be Skilled in that area. At a higher level, the character is Adept at it, and at the highest level he is a Master at the Skill.

Skill Challenge: As with a Characteristic Challenge, comparing like skills instead of like characteristics. An example is a Stickfighting skill challenge for an attempt to strike your opponent in a match. The two Governors are compared, with relevant modifiers, to give the Chart Number.

Skill Task: As with a Characteristic Task, except a particular skill is required. Examples of Skill Tasks are a Handguns Skill Task for firing an 8mm handgun at a target, a Zero-G Movement Skill Task for maneuvering through a disabled spaceship, and a Law Skill Task for deciding what constitutes a misdemeanor. The Skill Governor value is compared against the Difficulty value, with relevant modifiers, to give the Chart Number.

Success Number: The number (or less) that must be rolled on 2d6 to succeed.

Umpire: The person who controls the game. He generally creates and tells the story which the players experience.



CHARACTER CREATION

RACES

The Albedo universe is populated with anthropomorphic animals as opposed to human beings. Animal characters (or "critters") are played much like human characters found in other games, with the added bonus that each critter type has its own distinctive appearance, features and psychological quirks. These creatures are alien, and should not be treated as cute furry little people.

Physiology

The critters which populate Albedo are different enough from humans to rate a brief discussion about the special problems and advantages which an anthropomorphic animal will live with from day to day.

Species and reproduction: Critters are divided into definite species, each of which breeds true. There are no hybridized offspring in Albedo, except in the case of breeds which are physically very similar (i.e., different breeds of canine). This causes some emotional problems to the people of Albedo. Although members of different species may feel sexually attracted to one another, children are only possible to couples of the same species. Doubtless many devoted "mixed" couples will resort to adoption or artificial insemination when they wish children. The sex life of characters in Albedo can often be further complicated by mating seasons and pheremones. Females of most species can voluntarily control their pheromones to some extent. Some males, at least those from species with dramatic sex signaling features, can cosmetically enhance them. The females of most races can control their fertility to an extent which makes contraceptives an unneccesary invention.

Most societies do have a system of formalized relationships similar to marriage. It should be noted that many races are very protective of their females, and thus are prone to a variety of sexism. The lives and careers of female characters will often be complicated by the misguided attitudes of their male colleagues. Fortunately, enough responsible people exist to make sexist attitudes less of a problem than they could be.

Physical structure: Most critters are equipped with three fingers and a thumb. Critters descended from hooved animals have a slightly clumsier arangement, using their modified hooves as hands. Critters whose ancestors came equipped with claws now only have fingernails at the end of their digits.

The majority of critters in Albedo have tails. While chipmunks and the like have short little tails which do not intrude much into day-to-day life, many species will have quite stylish caudal appendages. Clothing is designed to allow tails free movement. The position of tails and ears give critters in Albedo a very visible and flexible body language, which greatly adds to their capacity for self expression.

The feet and legs of many critters are constructed somewhat differently from those of humans. The long foot bones and abbreviated thigh bones of many animal types give the appearance of the leg joints being reversed. Many critters retain their digitigrade foot bones, thus giving them an "ankle" joint at the level of the human knee. Such creatures effectively walk on the balls of their feet, with the toe section of their foot in contact with the ground, and the bulk of their foot forming what we would call their "calf." Readers who think this unattractive need only look at the internal illustrations to see otherwise.

Remember that most critters are covered in fur. Fur provides good insulation from the cold or from hot sun, but is hell to dry out after a shower. In addition to body fur, some species have extensive head hair, although prominent head hair is not always the current fashion. One side effect of having a permanent fur coat is a lack of sweat glands. Most critters do not have the ability to evaporate moisture from the skin to cool themselves (except through the hands and feet), but instead must pant. Bear this in mind whenever a fatigued character attempts to move silently . . . .

Critters of herbivorous descent retain their vegetarian natures, enjoying a wide variety of grains, fruits and vegetables. Grass does not feature in the diets of sentient critters. Since it is a very low energy food, herbivorous critters are no longer equipped to digest it, having traded off their complex and efficient digestive systems for intelligence. Carnivore-descended critters eat the foodstuffs created by bio-mass producers, although they also eat a quantity of vegetable matter.

Senses: While avians and the small-eared creatures have hearing approximating the human range, the larger-eared mammals have quite sensitive hearing, exceeding the human norm. This gives them a greater range of hearing, and a more accurate sense of direction (facilitated by their ability to swivel their ears). They are also far more sensitive to loud noises than avians or humans, and can react very badly to high pitched sound and ultrasonics.

The senses of smell and sight among critters are equivalent to human in strength and discrimination. Critters have full color vision, forward focusing eyes and good far/near sight. Some critters will have enhanced night vision (thereby becoming more sensitive to intense light). Races which have excellent night vision include possums, cats and owls.

Mammalian critters often pay more attention to scents than many humans are wont to do, but do not exceed human olfactory capability. There are no "blood hound" abilities among sentient creatures.

Character Race Determination

Before rolling a character, each player must decide what sort of creature his character is going to be. This is done by looking on the charts below to see what options are open for the character's race. The entry for each racial type includes the size of the various subspecies (recorded as the "**frame**"–see page 18) and the classes for a character's characteristics scores. Races are recorded by general type and specific sub-category.

The type of critter chosen does not necessarily govern the character's behavior. Do not stereotype characters into timid little mice or big bad wolves. Sentient races are complex individuals, and personal attitudes and inclinations vary widely among the individual races.

It is a good idea to list the advantages and disadvantages conferred by a character's race on the front of the character sheet. This allows play to be more easily influenced by the character's racial types.

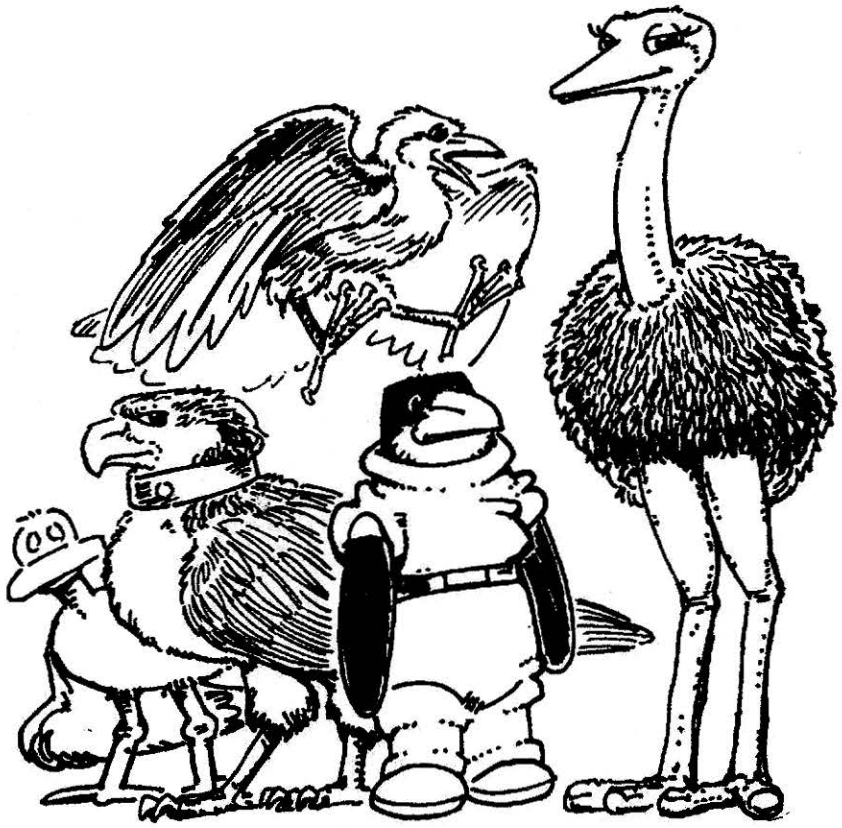
AVIANS

Sub-categories:

Minor avian (Small frame)
Str: A
Sta: D
MDex: E
Coord: F
Stab: D

Major avian (Light frame)
Str: B
Sta: D
MDex: D
Coord: E
Stab: D

Ratite (Average frame)
Str: D
Sta: D
MDex: D
Coord: D
Stab: D



Notes: Minor avians include Crows, Ducks, Parrots, Seagulls and Penguins. Major avians are Eagles, Hawks, Herons and Ravens. Ratites are descendants of the great flightless birds, such as Emus and Ostriches.

An avian's wings are not strong enough to allow flight, but can be useful for maneuver in zero-G conditions. The wrist joint of most avian species is equipped with a small hand (much like the "hand" arrangement on a bat or pterodactyl). A punch delivered by an avian character will do one less point of damage than normal, while a kick delivered by avian feet will do one extra point of damage due to the sturdy claws fitted to the feet of all birds (even ducks and penguins). The grip delivered by avian hands is relatively weak, so a DRM of +1 should be made whenever an avian attempts an activity which relies heavily upon strength of grip (e.g., hauling on a rope attached to a heavy object).

Avian characters will not normally wear clothing apart from decoration, rank badges and protective clothing, thus saving some wear and tear on the character's budget. There are no vacc suit liners made to fit avians (penguins are an exception). Avians in space will don full vacc suits, normally with separate sleeves which will only be pulled on in moments of high danger or immediately before risking vacuum exposure.

Each type of avian has its own particular differences. Some birds may use their wings to perform extended jumps or to slow a fall. Penguins will be natural swimmers. Eagle or hawk characters will have excellent long sight. Ratites have very flexible necks.

Temperaments will vary from sub-species to sub-species. Penguins seem to have developed an affinity for practical scientific skills, and often favor roles in the medical or heavy engineering professions. Penguins are noted for their strong family ties, and are often found working or travelling in "pods" of two to six individuals. Hawks and eagles, on the other hand, are fairly solitary, rarely seeking to be in groups of their own species.

The splendid plumage of many male avians, coupled with their dislike of wearing clothes, leads many people to consider avians vain. With most avian species, however, their easy grace and beauty is more pleasing than irritating.

CANINES

Sub-categories:
Dog (Average/Light frame)
Str: D/B
Sta: D
MDex: D
Coord: D/E
Stab: D

Wolf (Solid frame)
Str: E
Sta: D
MDex: D
Coord: C
Stab: C

Fox (Light frame)
Str: B
Sta: D
MDex: D
Coord: E
Stab: D

Notes: The most numerous single racial class, dogs come in a huge number of sub-species, most of which can interbreed with each other. Thus, dogs are a fairly sociable and cooperative species. Dog "breeds" cover a wide range of sizes and shapes. Small dogs will be terriers, while the largest will be heavy-set dobermans and hounds.

Wolves are a heavier, more solid species than dogs, and seldom interbreed with their lesser cousins. Wolves tend towards shorter tempers and more calculating dispositions than dogs, and are far less numerous.

Foxes are light framed carnivores with delicate, pointed faces. More calculating and inquisitive than other canine types, foxes also tend to be less bluff and boisterous. The bright fur and gorgeous tails of foxes make them particulaly pleasing to the eye, and well coordinated foxes are extremely graceful. Most foxes have digitigrade feet. The smallest foxes may be fennecs, whose large ears give them extraordinarily acute hearing.

FELINES

Sub-categories:
Cat (Light frame)
Str: B
Sta: D
MDex: D
Coord: E
Stab: E

Cougar, Jaguar, Lynx (Average frame)
Str: D
Sta: C
MDex: D
Coord: E
Stab: D

Lion, Tiger (Solid frame)
Str: E
Sta: C
MDex: D
Coord: D
Stab: D

Notes: Felines in the cat category come in a large variety of sub-species which vary according to the characteristic patterning of fur or the presence/non-presence of a tail. Some species of cat have digitigrade feet, while most do not. The unimposing size of the various cat species is well matched by their high agility.

The larger feline species (lions, lynxes, jaguars, etc.) are much rarer than their smaller brethren, and lack their high agility. While they combine considerable strength with a good dexterity, their heart/lung systems are not designed to support sustained physical effort.

Felines are often wrongly characterized as being fickle, a notion which should be dismissed by anyone who has tried to change a cat's mind about something! Cats are notable for their independence, although this does not stop them from forming very strong ties with selected individuals.

MARSUPIALS

Sub-categories:
Platypus (Small frame)
Str: B
Sta: D
MDex: D
Coord: E
Stab: E

Possum (Light frame)
Str: B
Sta: C
MDex: D
Coord: F
Stab: C

Kangaroo (Average frame)
Str: D
Sta: D
MDex: D
Coord: D
Stab: D

Notes: Platypi are small, densely muscled, stubborn little monotremes. The poisonous spurs of male platypi have atrophied down to vestigial toenails. Likewise, these creatures have lost their ancestors' ability to sense the electrical signature of other beings (look it up).

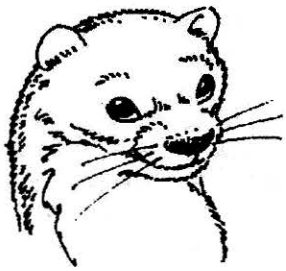
Possums are descended from the highly adaptable Australasian Phalangers (brush-tailed or ring-tailed possums). This is a minor category which has seen some increase in standing since the advent of starship travel. The prehensile tails and agile gripping feet of the various species of possum make them extraordinarily agile in zero-G. Possums are better adapted to short bursts of physical activity rather than sustained effort.

Kangaroos are hefty, average-framed creatures with pronounced digitigrade feet. Their heavy tails can support their owner's weight and can serve as a seat.

Marsupial females are highly independent, due to the pouches in which they carry their young. Marsupials with infants and young children rarely need to leave their careers, since their unobtrusive and highly portable infants do not interfere with their tool-using capacity, or even require much constant attention. Possums tend to favor careers in shipboard/zero-G fields, or involve themselves in zero-G colony activities.

MUSTELDAE

Sub-categories:
Ferret, Otter, Stoat (Light frame)
Str: B
Sta: D
MDex: D
Coord: E
Stab: B



Weasel (Light frame)
Str: B
Sta: D
MDex: D
Coord: E
Stab: E

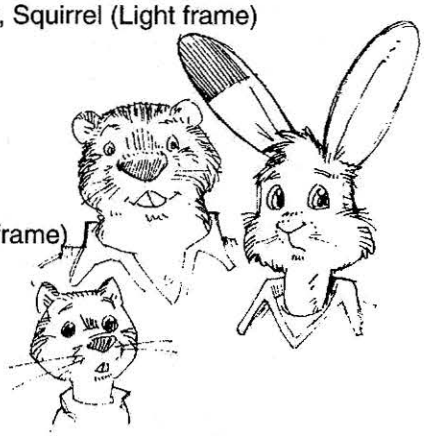
Notes: Quick, graceful carnivores, often brimming with nervous energy, musteldids are a sucessful species group with considerable charisma. Their hyperactive natures can occasionally get on the nerves of other, more sedate races. Otters are natural born swimmers.

Common opinion often fits musteldae into a set of racial sterotypes. It is "common knowledge" that weasels are calm and calculating, and that all stoats have short tempers. Some people feel that otters are naive in their playful inquisitiveness and easygoing natures. Experience has shown, however, that weasels, stoats, ferrets and otters can be quick thinkers, ruthless opponents, or caring friends, proving once again that racial stereotypes are bigoted nonsense. Musteldae often turn towards entreprenurial or governmental careers.

RODENTS

Sub-categories:

Mouse, Rat (Small frame)
Str: A
Sta: D
MDex: E
Coord: F
Stab: D



Chipmunk, Rabbit, Squirrel (Light frame)
Str: B
Sta: D
MDex: D
Coord: E
Stab: D

Beaver (Average frame)
Str: D
Sta: D
MDex: D
Coord: D
Stab: D

Notes: A highly successful category, despite the small average size of its individual species. The high adaptability and fertility of rodentia have given them a firm place in "critteroid" society. Rodents are notable for their gregarious natures, and can be cunning and clever creatures.

Mice and rats are typical members of the rodent family. While most mice are too lightly built to make good infantrymen, mice and rats feature strongly in military forces as vehicle crews, technical support, and staff (mice in particular seem to favor staff appointments).

Rabbits are a highly populous species. Many species-specific colonies were established during the second wave of colonization, and rabbits were notable for entering into this voluntary segregation. Many segregated colonies have developed highly racist (even paranoid) attitudes towards other species. The rabbits which have remained integrated with normal society, however, are normal well adjusted citizens.

Beavers, chipmunks and squirrels are far less numerous than the other rodent species, but have proven to be quite adaptable creatures, and are present in most planetary populations.

UNGULATES

Sub-categories:

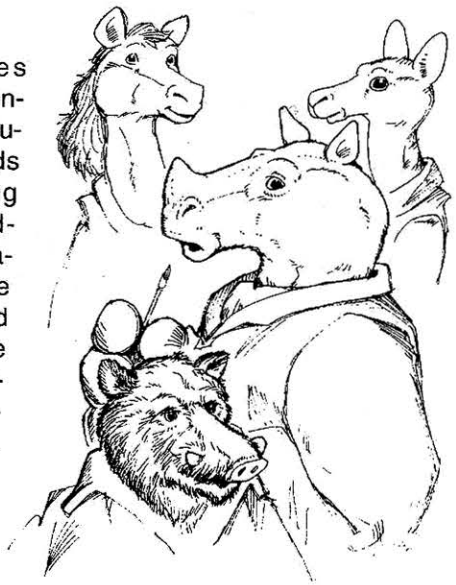
Camel, Cow, Horse, Llama (Solid frame)
Str: E
Sta: E
MDex: C
Coord: C
Stab: G

Goat, Pig, Sheep (Average frame)
Str: D
Sta: D
MDex: C
Coord: D
Stab: B

Rhino (Huge frame)
Str: G
Sta: D
MDex: C
Coord: B
Stab: C

Notes: Sentients descended from hooved animals are slightly disadvantaged in that they lack the flexible fingers of the other creatures (DRM of +1 when trying to perform a delicate manual operation). The vestigial toes of horses and their kin have reappeared as fingers, while the main hoof has shrunken down to match them in size. This effectively gives ungulates two clumsy opposable thumbs and one finger. A minor advantage of having rigid horny fingers is that a punch from such creatures will do one more point of damage than from critters using a normal fist. Horns on ungulates are much reduced or absent; if present, antlers do not shed annually.

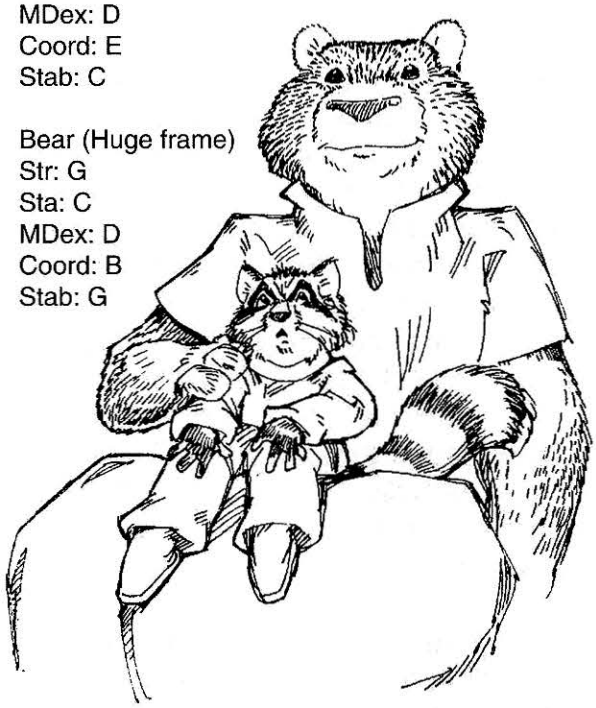
Ungulates tend to concentrate upon the humanities fields when entering into an advanced education, and are often found working in the academic, artistic or entertainment fields.



URSOIDS

Sub-categories:
Raccoon (Average frame)
Str: C
Sta: D
MDex: D
Coord: E
Stab: C

Bear (Huge frame)
Str: G
Sta: C
MDex: D
Coord: B
Stab: G



Notes: Omnivorous relatives of the canine family, bears and raccoons are good tool users. The imposing bulk of bears makes them extremely dangerous opponents in a fight. Do not be fooled into thinking that a bear's solid build means that it has the slow temper and easy disposition of a big man in a small world. Large bears might just as easily be grouchy, or even brutal bullies. Bears tend to like positions of authority, but are not always qualified for them.

Other Races

Should a player feel a strong desire to be a Hedgehog, a Mole, or some other creature not listed here, the decision is left to the discretion of the umpire. The only restrictions are that there are no cold-blooded creatures (frogs, lizards and the like), no marine mammals, and no primates! The denizens of Albedo encompass 163 separate races, so lack of scope should be no problem.

BACKGROUND ENVIRONMENT

Players should form a firm idea about their characters' world and society of origin. The Lifestyles section (page 115) extensively details the types of cultures which may be found in known space. Backgrounds which diverge from the model of the older inner worlds should be discussed with the umpire so that everyone present understands the ramifications of the character's background.

Sample character names taken from the "Erma Felna, EDF" story include:

Erma, Eda, Kanok and Tasak Felna
Joseph and Itzak Arrak
Colonel Hitzok
Sergeant Tzoquotah
Htzktl ("Hotzktel")
Qtzhlhii ("Quetzelholoi")

ILR names mentioned in the story include such convoluted names as Aerhanemenah, Bhallanieha and Tehstoah. Names from the "Birthright" story include Anton, Alfon, Andre and Kenda Kashoka, and Jenna Shodi.

The original scenario was done with an occasional tongue-in-cheek touch, like hooved animals having full manipulative abilities (all "off camera", of course). With names, there were some alternately silly and arbitrary choices, such as French names for penguins, none of which had any special significance that could be inferred.

So Erma is a perfectly normal name (though inspired by Erma Werke Waffenfabrik), as are many others in the course of the story. No one needs to get all exotic to keep the feel, but there are some guidelines in any case. Regionally, the early, older colonies would commonly have names of a Biblical nature, usually in alternate spellings for an exotic or Euro/Middle Eastern flavor: Itzak, Jozeph, Daud, Meschak, Efrim, Ibrahim, Mari, and so on.

Newer outer colonies would either go to more exotic or more mundane. So pseudo-Japanese or -Vietnamese names, like Toki, Kikako, Chian, Zokai, Thanh, and Ngaka could alternate with common English monosyllabics like Bob, Ed, Ted, Dan, Don, Tom, and so on.

Within the ILR, and among rabbits in general, long polysyllabic messes of vowels are common for family names, along with short snappy given names, so we have things like Ipcha Tankannahai, Th'ka Hassakenall, Bill Tandennandemai, Tede Barkalahaia, and such. Other species have specific name types as well, like the aforementioned French penguins. Mice often have strong Germanic/Euro names like Wolfgang, Helmut, Ernst, and Anton. Monotremes always, and marsupials commonly, have simple names like Bill and Ted. Coyotes have pseudo-Aztec sounding names, spelled with few or no vowels, like Qtzhlhii, Htzktl, Tktlqtzn, Anktlqtzn, and Khnihklnti.

Most characters will have names somewhat reminiscent of modern first names and surnames. About the only thing that is avoided is obvious Latin names. Credible created names are encouraged. As this is all just for effect, anything that sounds good, without being too obvious or cute, is acceptable. Players who insist on giving their characters "cutesie" names should be ritually killed as a warning to the others. Cute, stereotyped names will seriously prejudice play, and indicate that your player does not wish to take the game seriously.

A character's background will also effect his choice of career. While professional students and dabblers in the arts and crafts are common on the inner worlds, whose governments provide all of their citizens with housing, food and a basic spending allowance, such careers are rare on the more capitalist worlds where a wage must be earned simply to provide food and shelter. Military characters from colony worlds will be more likely to be in the local Homeguard than in the EDF, which draws the greater bulk of its recruits from the inner systems (which are far closer to the EDF's training academies).

Finally, a character's background environment will quite definitely affect his starting Ties and Antipathies. The older inner worlds all have staunch ConFed governments, and this attitude will be reflected in the attitudes of military characters from these worlds. The citizens of the outworld colonies tend towards a loyalty to their own worlds over and above the ConFed government. The citizens of species-specific worlds (inhabited by one species only) will often have mistaken or bigoted attitudes towards other species.

It is assumed that all characters will hail from the ConFed sphere of influence, rather than from the worlds of the Independent Lapine Republic (who form the "bad guys" of the whole scenario).

CHARACTERISTICS

The following section details the physical and mental attributes of individual characters which we will simulate in this game. Only those characteristics which will possibly have to be tested during play or which will affect a character's skills are used.

Among the game charts you will find a ready reference sheet for character generation. Follow the procedures detailed on the cheat sheet for the quickest technique of creating characters.

BASIC CHARACTERISTICS

The characters used in Albedo (from here on commonly referred to as "critters") are posessed of a wide variety of inherent abilities and talents, which this game shall define within eight characteristics: Strength, Stamina, Manual Dexterity, Coordination, Reason, Intuition, Drive and Stability.

These basic characteristics comprise the physical, neuro-physical, mental, and psychological abilities of the character.

Physical Characteristics

Strength (Str) is the expression of the brute force which the individual can apply. It is also used to indicate the character's physical size and physique. Strength is a measure of the character's ability to lift weights and arm wrestle, and his ability to resist damage and shock.

Stamina is used to determine the length that any physical activity can last.

Recoil. A character's Strength dictates the force of firearms recoil which he can comfortably handle. Provided that the character can control the recoil of a weapon, a number of shots may be made within the same turn (up to the character's maximum number of actions). To control the recoil of a weapon, the weapon must have a recoil value equal to or lower than the character's maximum recoil control rating. This rating is found in the chart below:

Maximum Controllable Recoil

Character's Strength	Maximum Recoil Control Rating
1 to 4	1
5 to 7	2
8 to 11	3
12 to 13	4
14 to 16	5

Subtract any Strength DRM's from the character's Strength before looking on this chart.

If the recoil of a weapon is higher than the permitted value, then 1 fatigue point is lost per point of excess recoil.

Controlling a weapon's recoil. Should more than one shot per turn be desired by a character with a weapon whose recoil is above the character's recoil control rating, the character must roll a test of his Strength versus (3 x the recoil of the weapon). A successful test indicates that the character may once again fire his weapon. A failed test costs the character one action, and means that he may not fire the weapon again during this turn.

Weapons firing wild bursts add one to their recoil.

Neuro-physical Characteristics

Manual Dexterity (MDex) is used to determine the control that the character can exert over delicate manipulations and tasks, specifically the steadiness and accuracy which can be brought to bear on manual tasks. It also measures the character's hand-eye coordination. Manual Dexterity would be tested if the

character was painting model soldiers, defusing a bomb or cracking a safe.

Coordination (Coord) is an expression of the character's ability to perform simultaneous actions with different parts of the body, as well as providing an idea of the character's ability to retain his balance. Coordination is also the measure of the individual's speed at performing actions such as drawing a gun, etc. As such, Coordination is used to assess a being's basic combat ability. Stamina, however, is used to determine the length of time that any Coordination-based activities may be continued.

Actions per turn. The number of actions which a character can perform in any single turn is dependent upon the character's Coordination score. The Action Sequence Chart on page 41 is used to determine the priorities of the actions which a character performs.

Actions per Turn

Character's Coordination Score	Number of Actions per Turn
1 to 2	1
3 to 4	2
5 to 8	3
9 to 12	4
12 to 15	5

Subtract any Coord DRM's from the character's Coord score before looking on the above chart.

Mental Characteristics

Reason and Intuition reflect different aspects of intelligence. **Reason** (Reas) is the individual's capacity for induction, logic, memory and pre-planning. It can be used for tests of memory and speed of thought.

Intuition (Intu) is the strength of the character's "sixth sense." It is used in combat as a determination of the character's initiative.

Initiative. A character's Intuition score will determine the type of initiative dice he will roll when engaged in a firefight, as shown by the following chart:

Initiative Dice

Character's Intuition Score	Type of Dice Rolled
5 to 8	1d6-1
9 to 11	1d6
12 to 13	1d6+1
14 to 15	3d3

Subtract Intuition wound DRM's from the character's initiative dice rolls.

Psychological Characteristics

An individual's **Drive** (Drv) represents his willpower and determination. It is a measure of the motivation and self discipline that he can bring to bear on any task with which he is faced. Drive is tested whenever a character wishes to embark on a long and difficult project, or when his determination comes under attack (such as a character declaring his intention to limp along on a wounded leg).

A character's **Stability** rating represents the ease with which he changes his feelings about things. "Unstable" individuals are not insecure, merely quite changeable in their moods.

OTHER CHARACTER ASPECTS

Frame Size

This is an indication of the physical bulk of a character. Most critters are built to a slightly smaller scale than human beings. An "average"-framed human is closer to the "solid frame" category for critter builds.

Disposition

Each character or NPC rolls twice on the Disposition Chart on page 21. The first of these rolls is the character's "Core." This never changes, and should form the basis of much of the role-play of that character. Conflicting dispositions are no real problem. A reckless person with a cautious disposition will act conservatively until pushed, whereupon he will become hot-headed and irresponsible. A combination which the player can't figure out can always be rolled again.

The second roll is the character's "Inclination", and can be changed slowly over the years. If the Inclination is the same as the Core (i.e., the same disposition is rolled twice), it becomes a "Disorder", and the characteristic is role-played to extreme lengths (i.e., greed rolled twice becomes miserliness).

Numerical values. Dispositions are given numerical values, which allows them to be used in tests made on the Comparison Chart. A character's Core is given a value equal to 1.5 x the character's Drive score. Inclinations are given a value equal to the character's Drive score. Disposition Disorders are given a value of 2 x the character's Drive score. This technique is of great benefit in playing non-player characters which the player characters encounter during adventures.

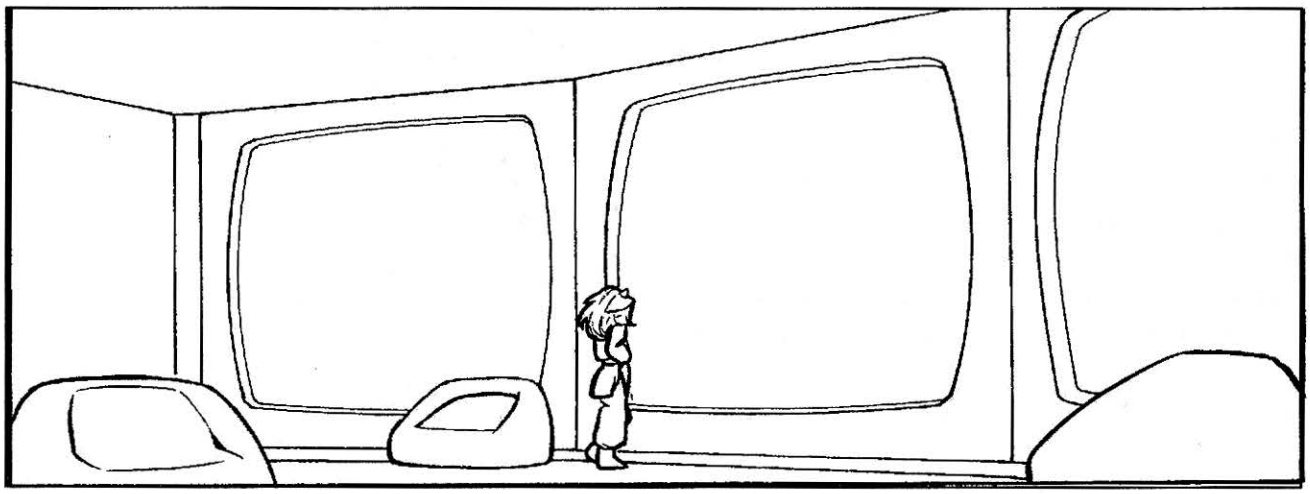
The Disposition Chart does not deal with shyness, force of personality, or any other attitudes which are more a function of the player's individual mentality and playing style than personality. Bravery and firmness of conviction are already incorporated into the system as the Drive characteristic and the character's Self Image (see below). Always bear an individual's characteristics in mind when role-playing the character's disposition. For instance, a character who is kind, but who has a high Reason and Drive, could be a cold and clinical opponent at need, but would not tolerate acts of wanton cruelty.

The SPI Rating

The ConFed authorities use a standard index to measure the general intelligence and psychological stability of individual citizens. Termed the **SPI** (Socio-Psych-Intel) rating, this index is used to measure a citizen's general intelligence, mental balance and motivation. Many professions (such as the armed forces of the EDF) require a minimum SPI rating.

Self Image

All characters have an ego, or Self Image, a rating of what they think of themselves at any particular time. It has a numerical value which varies within a certain range but starts at, and usually hovers around, the Drive value.



CHARACTER GENERATION

You will find a blank Character Sheet for photocopying in the back of this book.

Step 1: Choose the character's species.

Step 2: Determine characteristic values.

A character has 40 experience points to "spend" on the eight characteristics, in the manner indicated on the Characteristics Chart. The species determines the class of Strength, Stamina, Manual Dexterity, Coordination and Stability. For each of these characteristics, use the letter from the species description in the "class" row; for Reason, Intuition and Drive, use class D. Then determine the number of points you are willing to spend as shown on the "points" column. Where the row and column meet you will find your critter's characteristic number. To use the Fast Track line, see page 23.

Characteristics Chart

COST (points)		1	2	3	5	7	10	15
	A	3	-	4	-	5	6	7
C	B	5	6	7	8	9	10	11
L	C	6	7	8	9	10	11	12
A	D	7	8	9	10	11	12	13
S	E	8	9	10	11	12	13	14
S	F	9	10	11	12	13	14	15
	G	11	12	13	14	15	16	17
FAST TRACK		H	I	J	K	L	M	N

If a player wishes, he can gamble on starting with a higher value for any or all of the Reason, Intuition and Drive characteristics by rolling 1d6 and applying a modifier. This does not cost any points; however, the player should note that he has only a 33% chance of gain.

Roll	Modifier
1	-2
2	-1
3	nil
4	nil
5	+1
6	+2

Step 3: Calculate the following numbers:

SPI Rating:

$$\frac{\text{Reason} + \text{Intuition} + \text{Drive}}{10}$$

(Include one decimal place. Note the effect on SPI rating of Disposition, in Step 4, and of Advanced Education, in Step 8.)

Recoil Number: 1/3 Strength (round down)

Fatigue Points: 3 x Stamina

Actions per Turn: 1/3 Coordination (round down)

Self Image: Ranges from 1/2 to 1-1/2 Drive. Begins equal to Drive.

Step 4: Roll the character's Dispositions–the Core and the Inclination–or the umpire may decide to allocate them personally.

Roll 1d20 twice. These are the two Dispositions. If the same number comes up twice, the character has one Disorder instead.

Disposition Chart

Dice roll	Disposition/Disorder
1	Cautious/Paranoid
2	Polite/Sycophantic
3	Exacting/Perfectionist
4	Generous/Wasteful
5	Talkative/Hysterical
6	Kind/Saintly
7	Responsible/Fanatical
8	Modest/Antisocial
9	Straightforward/Callous
10	Friendly/Amorous
11	Reckless/Manic
12	Vulgar/Obscene
13	Vague/Apathetic
14	Greedy/Miserly
15	Reserved/Mute
16	Cruel/Diabolical
17	Irresponsible/Amoral
18	Conceited/Messianic
19	Devious/Treacherous
20	Cynical/Psychopathic

A character with a Disposition between 11 and 20 on the chart must subtract 0.2 from his SPI Rating. If both the Dispositions (Core and Inclination) are such, subtract 0.4. If the character has a personality Disorder, subtract 0.8.

Characters with Disorders will be refused entry into the EDF and Homeguard.

Step 5: Begin to allocate skills. All player characters will initially have the following:

Literacy
Melee (Armed) =
(Axe/Club/Stick/Knife Fighting)
Melee (Unarmed) = (Boxing/Wrestling)
Small Ground Vehicle Driver
Sneaking

Step 6: Decide on the type of background education the character received, and allocate further skills.

Military Background
- Current Affairs
- Law
- Political Science

Institutional Background
- Literacy (at Adept)
- Higher Mathematics
- Research

Clan/Family Background
- 1 Art/Craft or Musical Instrument skill
- Current Affairs or Socio-history
- Literacy (at Adept)

Step 7: Choose three more Social skills and three more Movement/Perception skills (page 24).

Step 8: Decide on a career for your character–EDF, Homeguard, Diplomatic or other. Choose a Skill Package appropriate to your chosen career (page 26). You are Adept at the primary skill, and Skillful at the two secondary skills.

EDF characters also receive Coolness under Fire automatically.

Step 9: Develop some kind of idea of what your character's ambitions are.

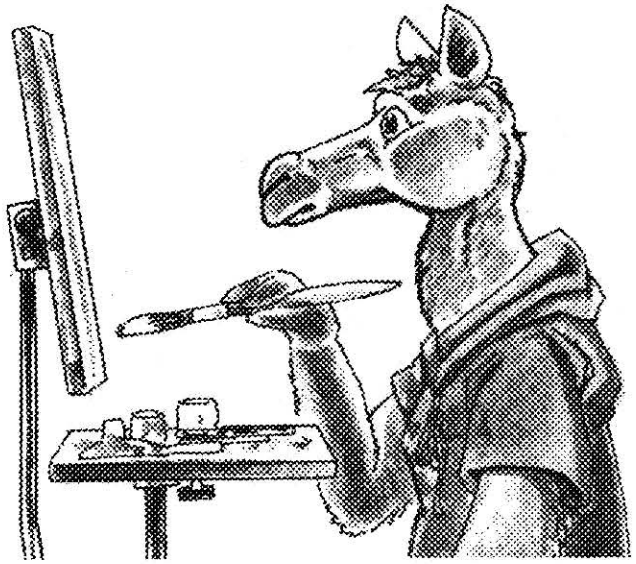
Choose and/or upgrade skills related to the chosen career. A character has 20 experience points to spend on Skills and Expertises (or 40 or 60, if the umpire decides to begin the game at a more advanced level). At least one skill must be related to some kind of sporting or leisure pursuit.

Skill Costs	
Gain a skill	2 points
Become adept	5 more points
Become master	15 more points
Gain expertise	1 point
Gain great expertise	3 more points
Gain exceptional expertise	10 more points

Apply bonuses to your SPI for each Skill.

SPI Skill Bonuses	
Skill Level	SPI Bonus
Skillful	+.1
Adept	+.2
Master	+.3

Step 10: Flesh the character out. Work out such things as his homeworld (see Star Systems on page 127) and current location; early background and subsequent history (bearing in mind what you know of his education and career choices to date); Ties, allegiances, Antipathies (bearing in mind homeworld, background and disposition); other notes that may contribute to your character's individuality; draw a picture (if you feel artistically inclined); and most importantly, give your character a name (the fun part. You've earned it.).



FAST TRACK CHARACTER GENERATION

When you're not in the position to invest a great deal of time creating characters (such as for a one-off "quickie"), you can use the following shortcut. Please note these characters will not always have the same individuality as ones that have been created the standard way, and some may be better or worse. Nevertheless there will be times when you may find this "Fast Track" useful.

Compare this with the standard character generation procedure.

Step 1: Choose species.

Step 2: Determine characteristic values by rolling 1d6 and cross-referencing on the Characteristics Chart on page 20 (instead of spending points). Take the entire sequence.

					no modifiers			
Roll	Str	Stam	MDex	Coor	Stab	Reas	Intu	Drive
1	K	L	K	J	K	L	K	J
2	L	K	J	K	K	K	L	J
3	I	J	M	L	J	J	L	K
4	M	L	J	I	J	J	I	M
5	I	J	K	K	M	M	J	I
6	L	J	M	J	I	I	M	J

Steps 3 & 4: Calculate other values, choose dispositions.

Steps 5, 6 & 7: Determine the skills. For Step 6, roll 1d6 for the appropriate career chart.

Military Career

Roll on d6	Skills
1	A* B* C D E G J L* M* N O T W Z
2	A B* C D E G* J* L M N P T V W*
3	A B C D* E H* J* L* M N S W X
4	A* B* C D* E H J L M* N R S X
5	A* B C D* E F J L M N V* Y* Z
6	A B C D* E G I J K L M* N* W*

Areas of Expertise: Spot, Throw

Diplomatic Career

Roll on d6	Skills
1	A B C D* E G* I L N Q R T* W* Z
2	A B C D* E G* I Q R* T* W* Z*
3	A B C D* E F G N* R S T W* X Z*
4	A B C D* E F* G* I Q S T* W X Z
5	A B C D* E F G* H* Q R T W Y* Z*
6	A B C D* E G I* J* L* N T W X Z

Areas of Expertise: Bargaining, Mingle

Other Career (Admin., Service, etc)

Roll on d6	Skills
1	A B C D E* F G* L N R* T W Y*
2	A B* C D E G J K L* N T* W Z*
3	A B C* D* E I L O* R S U* X Z
4	A B C D* E F J* H* Q R T W* X
5	A B C* D* E F* J M N* S Y Z
6	A* B C D* E H I L P* U V* Z

Areas of Expertise: Spin Yarn, Assess Personality

Skill Key

A	Melee (Armed)
B	Melee (Unarmed)
C	Small Ground Vehicle Driver
D	Literacy
E	Sneaking
F	Art
G	Current Affairs
H	Leadership
I	Musician
J	Coolness under Fire
K	Climbing
L	Handguns
M	Longarms/Grenade Launcher
N	First Aid
O	Large Ground Vehicle Driver
P	Aerospace Pilot
Q	Administration
R	Computer Operations
S	Higher Mathematics
T	Law
U	Mechanical Repair
V	Navigation
W	Political Science
X	Research
Y	Socio-history
Z	Streetwise

*Denotes Adept at skill.

SKILLS AND AREAS OF EXPERTISE

Skills and Areas of Expertise can be acquired by characters to help them achieve their aims in the game. See the Definitions section of the book (page 6) for a better idea of the difference between a Skill and an Area of Expertise.

Generally, the only Skills a character can have are from the list below, although various academic disciplines in the Knowledge Skills field may be created where appropriate. Areas of Expertise may be chosen or created freely, at the umpire's discretion. They are easier to acquire but generally less valuable than Skills.

SKILLS

Social Skills	Governor
Art	Intu, MDex
Current Affairs	Reas
Dancing	Coord
Leadership	Self Image
Literacy	Reas, Intu
Musician	MDex, Intu

Movement/Perception Skills	Governor
Climbing	Str, Coord
Coolness under Fire	Self Image
Sneaking*	Coord, Intu
Swimming	Str
Zero-G Movement	Coord

*Sneaking includes Hiding in Cover, Camouflage, Disguise

Weapon Skills	Governor
Aerodyne Weapons Systems	MDex, Reas
Auto G.L. Gunnery/ Turreted Main Arms	MDex
Melee (Armed)	Coord
Melee (Unarmed)	Coord, Str
Handguns	MDex
Longarms/Grenade Launcher	MDex

Tool-using Skills	Governor
Aerospace Pilot	MDex
Demolitions	MDex, Reas
Sm Ground Vehicle Driver	MDex
Lrg Ground Vehicle Driver	MDex
Starship Pilot	Reas

Knowledge Skills	Governor
Administration	Reas, Drv
Biology	Reas
Botany	Reas
Brokerage	Reas, Intu
Computer Operations	Reas
Ecological Science	Reas
Electronics	MDex, Reas
Fine Arts Appreciation	Reas, Intu
First Aid	MDex, (Reas or Intu)
Forgery	MDex, (Reas or Intu)
Geology	Reas
Higher Mathematics	Reas
Jump Drive Navigation	Reas, Intu
Law	Reas, Intu
Mechanical Repair	MDex, (Reas or Intu)

Medicine	Reas
Mineral Appraisal	Reas
Navigate	Intu
Philosophy	Reas, Intu
Physics	Reas
Political Science	Reas
Research	Reas, Intu
Salesman	Intu, Drv
Starship Navigation	Reas
Socio-history	Reas
Streetwise	Intu
Surgery	Reas, MDex
Systems Engineer (Specify)	Reas

Tactical/Strategic Skills	Governor
Spatial Tactics	
Starship Weapons Systems Deployment	Reas, Intu
Naval Deployment	Reas
Small Unit Tactics	
Air	Reas, Intu
Ground	Reas, Intu
Strategic Skills	
Strategic Deployment	Reas, Intu
Logistics	Reas

AREAS OF EXPERTISE

Some Suggestions	Governor
Assess Personality	Intu
Bargaining	Drv
Debate	Reas
Detect Lie	Intu
Gambling	Reas
Mingle	Intu
Public Speaking	Drv
Repartee	Reas
Scrounge	Intu
Snitch/Listen	Intu
Spin Yarn	Reas
Spot	Intu
Throw	Coord

SKILL PACKAGES
(Some Suggestions)

General Package	Primary Skill	Secondary Skills
Administration	Administration	Bargaining, Computer Operations
Advanced Education	1 Knowledge skill	2 other skills as appropriate
Aerospace Aircrew	Computer Operations	Electronics, Zero-G Movement
Business Sales	Salesman	Bargaining, Brokerage
Diplomacy (SPI≥3.0)	Current Affairs	Law, Mingle
Martial Arts	Melee (Unarmed)	Handguns, Melee (Armed)
Merchant Pilot (SPI≥3.0)	Starship Pilot	Aerospace Pilot, Starship Navigation
Merchant Supercargo	Administration	Bargaining, Streetwise
Political Studies	Political Science	Research, Socio-history

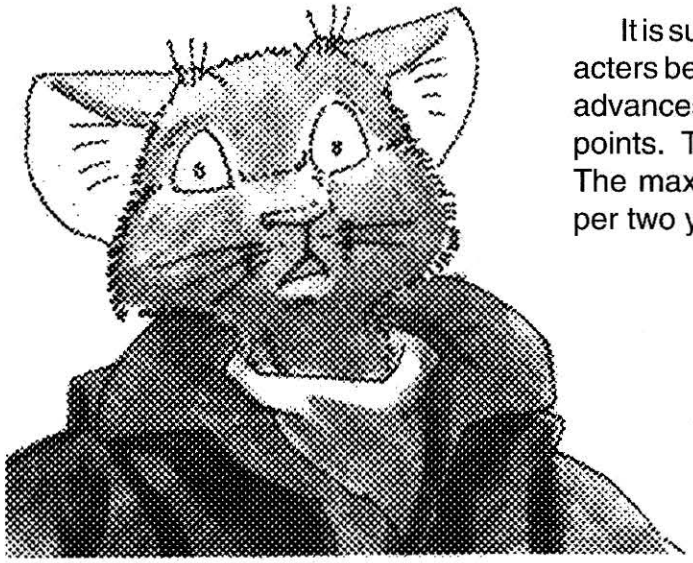
Military Package	Primary Skill	Secondary Skills
Aerospace Gnr/Obs	Aerodyne Weapons Sys	Mechanical Repair, Spot
Aerospace Pilot	Aerospace Pilot	Aerodyne Wpns Sys, Navigation
Combat Vehicle Driver	Lrg Grnd Vehicle Driver	Mechanical Repair, Navigation
Combat Vehicle Gunner	Turreted Main Arms	Computer Operations, Spot
Combat Weapons	Longarms	Coolness under Fire, Handguns
Command (SPI≥3.0)	Tac/Strat skill appropriate to character's specialty field or Administration	Assess Personality or Coolness under Fire; Leadership
Engineering	Systems Engineer (specify type)	1 Tech Skill; Higher Math or Physics
Field Craft	Sneaking	Climbing, Spot

Military Package	Primary Skill	Secondary Skills
Field Medic	First Aid	Coolness under Fire, Medicine
Heavy Weapons	Longarms/Gren.L.	Auto Grenade Launcher, Throw
Interrogation	Detect Lie	Assess Personality, Bargaining
Starship Gunner	Starship Weapons Deploy	Naval Deploy, Small Unit Grnd Tactics
Starship Navigator	Jump Drive Navigation	Computer Ops, Starship Navigation
Starship Pilot (SPI≥3.5)	Starship Pilot	Starship Navigation, Starship Weapons Deployment
Vehicle Mechanic/ Engineering Asst.	Mechanical Repair	Electronics, Computer Operations

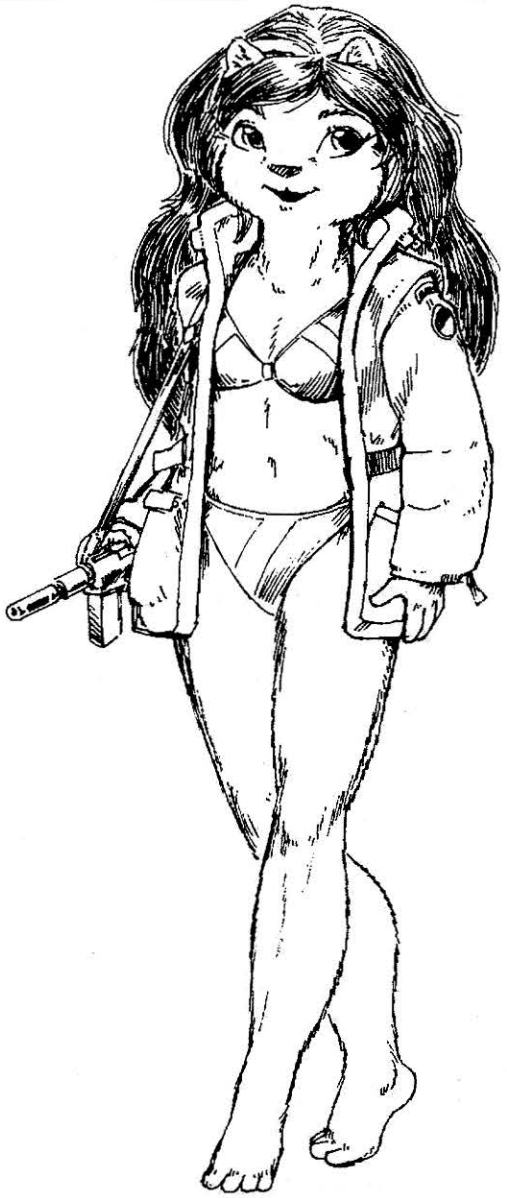
Military/Diplomatic Ranks

Rank #	Military	Diplomatic
1	Cadet	Cadet
2	Lieutenant	Junior Aide
3	Senior Lieutenant	Aide
4	Captain	Undersecretary
5	Commander/Major*	Secretary
6	Senior Commander/Colonel*	Senior Secretary
7	Admiral/General*	Sector Minister

*Space forces/ground forces use different nomenclature.



It is suggested that all officer/diplomat characters begin the game at Rank 2. Further rank advances (i.e., promotions) cost experience points. The cost is 3 points per rank number. The maximum advance is one rank number per two years game time.



Sample Characters

For those people who are familiar with the "Erma Felna, EDF" story in Steve Gallacci's *Albedo* comics, we are including statistics in game terms for Erma and two of her friends, allowing players to draw a comparison between them and their own characters.

Name:	Felna, Erma EDFSN 575 395 2020
Rank:	Commander, EDF TAC aerospace command (rank grade 3)
Born:	171-01-22, Anniahport, Annah (Dornthant II)
Racial type:	Feline (cat)
Frame size:	Light

Strength:	8
Stamina:	10
MDexterity:	12
Coordination:	12
Reason:	13
Intuition:	10
Drive:	13
Stability:	12

Disposition:	Responsible, Straightforward
SPI Rating:	4.0

Skill Ratings:

Administration (Adept)	Handguns
Aerodyne Weapons	Higher Math
Aerospace Pilot (Master)	Law
Air Tactics (Adept)	Leadership (Adept)
Assess Personality	Long Arms
Computer Operations	Melee (Unarmed)
Coolness under Fire	Research (Adept)
Current Affairs (Adept)	Spot
First Aid	Zero-G Maneuver

Specialist rating (Aerospace Pilot): Spec 4

Erma has devoted herself to a professional role, and lacks skills in other areas.

Description:

Erma stands about 140cm in height, has light gold-brown fur (slightly paler in front), dark red-brown head hair and green-gold eyes. Unlike many felines, she has only the barest stub of a tail.

Encouraged into a career in aerospace from an early age, Erma was educated at the Homeguard Academy on Dornthant. She entered the EDF, receiving her command and aerospace training at the EDF Academy on Danet. While in training, Erma distinguished herself by neutralizing a terrorist sniper, receiving awards for bravery and initiative. She was engaged in combat during the Derzon campaign, where she lost her vehicle to enemy fire and was later wounded during a ground engagement.

Upon recuperating, Erma ran afoul of a sexist faction within the EDF command which conspired to remove her from combat duties. This ploy was thwarted by more responsible officers (backed by the Net), who managed to have Erma transferred to the socio-politically volatile world of Ekosiak, where her talents would be of use.

Name:	Kho, Dea-Htuhok CSSN 575 827 8489
Rank:	Assistant Secretary ConFed Diplomatic Corps (civil service grade 7)
Born:	168-07-12, Encho City, Annah (Dornthant II)
Racial type:	Canine (Lupine)
Frame size:	Average
Strength:	9
Stamina:	9
MDexterity:	11
Coordination:	10
Reason:	12
Intuition:	12
Drive:	11
Stability:	10
Disposition:	Polite, Responsible
SPI Rating:	4.1

Skill Ratings:

Administration (Adept)	Debate
Assess Personality (Great)	Handguns
Bargaining (Great)	Law (Master)
Computer Operations	Mingle
Current Affairs (Master)	Political Science

Description:

Dea stands about 155cm tall. She has a tail and a rich red-brown coat with a near white ventral countershade. She has gold-green eyes. (Dea makes a good contrast with Jenna Shodi, another female fox, but of a different species. Jenna is of a shorter, lighter build, and has digitigrade leg articulation. There is an illustration of her on page 25.)

Dea's primary education was provided within her extended family, the clan Aldan-Kho, which trained her to pass her Dornthantii Homeguard equivalency at SD 184-11-30. The clan sponsored her through the ConFed civil service apprenticeship program in Dornthant and Danet.

Dea served with distinction on the staff of the Enchawa ConFed office from SD 190-01-01 to SD 192-09-20, and then transferred to Ekosiak to act as assistant to ConFed secretary Shato.

Dea is currently a detached member of the clan Sha-Kho of Tochtah (Dornthant 6), but she still maintains a connection with Aldah-Kho, and is sponsoring several cousins into ConFed and EDF service.

Dea's personal interests parallel her professional ones. She studies sociology and political science, and has several significant essays in the Net.

Both Dea and Erma hail from the Dornthant system. The Dornthantii accent is quite pronounced, and is easily recognized. When speaking between themselves, Dornthantii will often drop into a thick vernacular which is almost impossible for non-Dornthantii to follow.

Name:	Toki
	EDFSN 213 395 5010
Rank:	Commander, EDF staff
	Ish Tako
	(rank grade 3)
Born:	172-12-02, Settlement City,
	Charanx (Danet 3)
Racial type:	Rodent (mouse)
Frame size:	Small
Strength:	5
Stamina:	11
MDexterity:	14
Coordination:	13
Reason:	12
Intuition:	14
Drive:	12
Stability:	9
Disposition:	Friendly, Straightforward
SPI Rating:	4.1

Skill Ratings:

Administration (Adept)	Leadership
Assess Personality (Great)	Logistics (Master)
Bargain (Great)	Long Arms
Computer Operations (Adept)	Mingle (Great)
Coolness under Fire	Research
Current Affairs	Scrounge
Detect Lie	Sneaking
Fine Arts Appreciation	Snitch
Handguns	Zero-G Maneuver
Law	

Description:

A strikingly warm and irrepressible character, Toki stands 116cm tall. Her fur color is light silver-grey, fading to near white on the ventral surfaces. Her eyes are a bright green, and she has prominent facial whiskers.

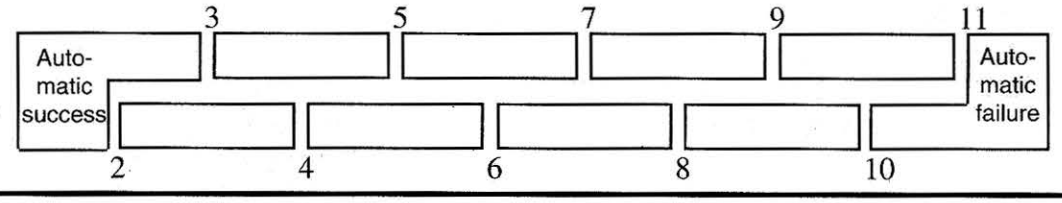
An old friend of Erma's from their academy days, Toki's initial basic education was in civilian institutions rather than military schools. She also lacks Erma's military family background. Toki has thus had to deal with a greater diversity of people than her friend Erma, and is far more at ease in social situations.

Toki has spent the last few years in a staff administrative position slot with the C.F.C., but has recently found herself conveniently co-assigned with Erma in a squadron command position. Toki is an excellent administrator, and is not afraid to utilize unconventional methods. Though psychologically capable of combat, her temperament and training fit her for staff positions.

PLAYING THE GAME

The Comparison Chart

Chart Number	-12 and under	-9 -10 -11	-7 -8	-5 -6	-2 -3 -4	1 0 -1	4 3 2	6 5	8 7	9 and over
Success Number	2	3	4	5	6	7	8	9	10	11	12



Whenever a character attempts some action or feat, the Comparison Chart is used.

The umpire:

• Decides whether a Characteristic or Skill is needed, and which.

• Decides whether it involves only the character (thus being a Characteristic Check or Skill Task, which should be compared against a Difficulty Number), or whether it is in comparison with another critter (thus being a Characteristic Challenge or Skill Challenge, which should be compared against the other critter's Characteristic or Skill Governor).

• Compares the two.

Characteristic value or Skill Governor value of attempting critter	MINUS	Difficulty Number of task or Characteristic/ Skill Governor value of other critter

If there are two governors, take the average value (round down).

• Adds or subtracts any modifiers.

• Now has the Chart Number.

• Looks at the Comparison Chart to find the appropriate Success Number. This score (or less) has to be rolled on 2d6 for the character to succeed.

The attempting character:

• rolls 2d6.

• If the result is the Success Number or ONE less, this a **Close Success**–it has succeeded by one Success Grade. If the result is TWO or THREE less, this is a **Good Success**–it has succeeded by two Success Grades . . . and so on. There can be up to four Success Grades. Additionally, a roll of 2 is always a success.

For example, if the Success Number is 9 and the player rolls 3, it is a Very Good Success, with three Success Grades.

• If the result is greater than the Success Number by ONE or TWO, this is a **Close Failure**–it has failed by one Failure Grade . . . and so on. There can be up to four Failure Grades. A roll of 12 is always a failure.

• The umpire interprets this result as an outcome, and breaks the news–joyful or awful–as to what has just happened.

Task Difficulty Numbers

Very simple	0
Simple	5
Average	10
Difficult	15
Very difficult	20
Nearly impossible	25

Chart Number Modifiers

For a Skill Task	
Character has no skill	-5
Character has the skill	–
Character is adept at the skill	+5
Character is master at the skill	+10
For a Skill Challenge	
As above and also:	
Opponent has no skill	+5
Opponent has skill, but attempting character does not	-10
For a Characteristic Check or Challenge	
Character has expertise	+2
Character has great expertise	+5
Character has very great expertise	+10

Result Grades

(5)	Natural 2	"The Tops"
(4)	6 or more below	Excellent success
(3)	4-5 below	Very good success
(2)	2-3 below	Good success
(1)	Success Number or 1 below	Close success
(1)	1-2 above	Close failure
(2)	3-4 above	Bad failure
(3)	5-6 above	Very bad failure
(4)	7-8 above	Abysmal failure
(5)	Natural 12	"The Pits"

NOTE: A natural 2 is only "The Tops" if the Success Number is greater than 2. A natural 12 is only "The Pits" if the Success Number is less than 12.

DEVIL'S DICE

A lot of the fun (for the umpire, at least) is telling the players exactly what has happened to them when they have rolled a natural 2 (or better still, a natural 12). If the Devil's Dice rule is being used, then the umpire rolls 2d6 to see if a natural 2 comes up again (or another 12, as the case may be). If so, then the absolutely, totally, most stupendously good thing (or the ultimate worst thing) that could ever happen to the character does so. If instead a natural 12 comes up, the umpire may consider letting the character's initial good fortune go a little sour (or let them off the hook on a 2).

For example, a player may be at a diplomatic cocktail party, engaging in gently witty repartee with the Planetary Governor's wife. On a roll of 12, the umpire may announce that the whole room has fallen into shocked silence after the loud phrase "My lady, do you think your heart can stand it at your age?" It turns out that everyone present except the character knows full well of the Governess' precarious heart disease and the recent death of her sister from the same. The Devil's Dice are rolled–on an 11, it may mean that she bursts into a flood of tears and then races off hysterically to have yet another major nervous breakdown. On a 12, she collapses with a cardiac arrest, and furthermore the Governor, despite his old war wounds, attacks the character with a cake knife.

Conversely, favorable Devil's Dice can find you suddenly adopted as their legally binding heir. You deserve it if you can throw two naturals in a row!

(This is an example of Devil's Dice at work in a friendly situation. Imagine the damage they can do when you're firing a rocket launcher.)

INTERPERSONAL RELATIONS

DISPOSITION

All characters have two Dispositions, the Core and the Inclination. (See Character Generation, page 20.)

How Disposition Works

In practice, dispositions are a guide as to how to role-play the character. They add dimension to the game. The higher the character's Drive value, the more pronounced the dispositions will be; the higher the Stability, the more steady. A character with, say, a high Drive but low Stability may flit from an extreme of the Core Disposition to the Inclination to nothing much at all and then back again. The umpire may award bonus experience points for good and consistent role-playing of Disposition.

SELF IMAGE

All characters have a Self Image representing what they think of themselves at any particular time. (See Character Generation, page 20).

How Self Image Works

Self Image is one of the most important aspects of the game. It is used not only as a guide to role-playing but also in the game mechanics (such as in the skills of Leadership and Coolness under Fire). Its level is set entirely at the umpire's discretion.

When an event occurs which may have a bearing on a character's Self Image, the umpire will first decide upon the usually (but not always) obvious question of whether it should actually go up or down, and then take into account both the impact of the experience and the character's Stability value in deciding how much to change its value.

For example, a leader who failed a Coolness under Fire task in combat may lose a Self Image point; if he failed it badly or in full view of his squad, or if he has a low Stability characteristic, then he may be made to lose two or three more. On the other hand, the umpire should recognize that a successful Coolness under Fire task, such as dashing out and rescuing a wounded companion, should make the character feel good about himself and entitle him to a few points' increase. If the umpire is uncertain about whether to change Self Image, a Stability Check roll may decide. Characters with very high Stability values need a lot to happen to them before they will go up or down in their Self Image–they're the reliable kind.

Examples of things that will increase a character's Self Image:

- Experiencing things that make him feel good (praise or reward).

- Performing an action which satisfies his disposition (a greedy character making a lot of money).

- Contributing to or helping someone or something to which he has a Tie (doing a good professional job when he has a Tie to his career)

- Detracting from or harming someone or something to which he has an Antipathy (dispatching the enemy). Use this one carefully–it sometimes backfires! Vicious plots performed against people that the character only slightly dislikes will reduce Self Image rather than increase it.

- Meeting some challenge successfully, or achieving some goal.

• At the player's own suggestion, if he feels it is appropriate to the role-playing.

• Picking up lost points by correcting an initial wrong (paying off a debt to a friend, after having caused trouble in the first place).

• Picking up lost points by receiving support or reinforcement from people with whom he has a Tie (sitting down and talking about it).

Examples of things that will decrease a character's Self Image:

• Experiencing things that make him feel bad (official reprimands, hurtful rumors).

• Performing an action which goes against his Disposition (an exacting character having to leave a mess).

• Having harm happen to something or someone to whom he has a Tie, or good fortune happen to the source of his Antipathy.

• Failing some task (a harshly driven person might set himself particularly brutal standards and fail miserably).

• At the player's own suggestion (if his conscience is bothering him over his character's actions). It is a brave player who volunteers to sacrifice points in this way, and such honesty should not go unnoticed.

The Effect of Self Image

Self Image is the governor for certain Skills and Areas of Expertise, such as Leadership and Coolness under Fire. This works as per the usual rules.

The role-playing effect of Self Image is more subtle. A character whose Self Image is very high should be played as happy, excited, ambitious, self-confident, and perhaps even with bravado, foolhardiness, and disregard to others. This is the time when the character is most likely to volunteer to charge over the hill in a hail of bullets.

A character whose Self Image is very low is apt to be morose and uninspired. Don't be fooled, though. Depending on his Disposition he may be aggressive, berserk or hungry for attention. Low Self Image generally hampers a character's efforts to achieve his goal in a story. Nevertheless, please note that both extremes can be counterproductive.

Self Image points may be seen as rewards to be dished out to the players when they roll good scores on the dice and otherwise get things right. This is true to an extent, but a player who correctly role-plays his character as a devestated wreck when Self Image reaches rock bottom is a lot more worthy at the end of the game of receiving bonus experience points than someone who just carries on regardless. Likewise, it may be in line with a player's character to gain Self Image by doing socially unacceptable things like kicking cripples–you wouldn't exactly want to reward him for doing it, although that's the way the system may work in the long term.

The umpire's power to give and take Self Image points is a powerful tool or means to an end, and the end is a rewarding playing experience. Although most people would like to build up as many as they can, the most intreresting games won't involve having everybody going around feeling pretty damn good all of the time but rather learning how to cope with crises and deal with problems in a mature fashion. This is the great strength of role-play.

TIES AND ANTIPATHIES

All characters have a number of Ties and Antipathies. A Tie is a feeling of friendship, loyalty, respect or duty towards a person, a nation, a group or an idea. An Antipathy is a feeling of distaste, disgust or aversion to one of the above concepts. These all have numerical values. A subject for which the character has neither a Tie nor an Antipathy has a value of 0.

How Ties and Antipathies Work

Early on, a player is encouraged to think up many (between four and twelve; maximum twenty) Ties and Antipathies, consistent with the player character's devised backgound and personality. These will generally be at the Drive value unless chosen otherwise.

Tie/Antipathy values are again a guide to how to role-play, but they can also be used in the mechanics of the game (e.g., a Drive Check against a Tie when a character has to take off and fly away for the safety of his crew but leaves a friend stranded in the battle zone).

When a character is given the opportunity to form an opinion about a person or organization, or to reassess his opinion about someone or something for whom a Tie/Antipathy already exists, it must first be decided whether the experience is positive or negative, that is, whether it would strengthen or reduce the Tie/Antipathy. In many cases this is obvious, but at other times it may take the wisdom of the umpire or the gut feeling of the player.

Make a Stability roll versus 10. If the roll is failed, increase or decrease (as appropriate) the Tie/Antipathy by 1 point per Success Grade.

In general, unless otherwise stated, the Tie strength of one character for another is the same as the second for the first.

LEADERSHIP

Leadership skill is a combination of the character's personal charisma and his skill in balancing the emotions of the people around him. Characters with Leadership skill have some ability to affect the confidence and relationships of their companions. Leadership skill rolls may be called upon to motivate subordinates into performing acts (i.e., "asking favors" and "persuading").

If a character is part of a group and wants to lead it, then to be actively acknowledged by that group to be its leader (as distinct from merely being legally in command by rank) gathers additional bonuses. He must actively attempt to be established as that group's leader by making a successful Leadership Skill Challenge with every member. This may take some time, as it may not happen successfully all on one occasion.

It is advantageous to a leader if his subordinate has a Tie with him. At their first interaction, characters with Leadership skill may force a check for a Tie experience by rolling a Leadership Task and altering the Tie strength up or down by the number of Result Grades. In a similar way, a leader can try to reduce Antipathies within the group, including those against himself.

PERSUASION (ASKING FAVORS)

When a character approaches an NPC to request a favor, the NPC's Tie strength with the character may be used to determine whether or not the favor will be granted. Perform a Tie Check–roll the NPC's Tie strength versus the difficulty of the favor. A Difficulty of 10 would represent a major favor (definitely inconvenient to perform). Others may range from 2 (a very simple favor, often expected as a social nicety) to 20 (very difficult and dangerous).

Persuasion Modifiers

Character is a recognized authority figure .....+2
Character is tied to the NPC/group and is acknowledged as its leader ....+5
Character's Leadership is higher than opponent's Self Image .....+5
Favor asked is amoral or socially repugnant .....-5
Favor asked goes against character's disposition .....-5

Examples of favors include lending a car, sharing rations, telling things one would rather not tell, joining in on a night-time raid, and giving covering fire in a combat situation. As you can see, the term "favor" is used very broadly.

ENCUMBRANCE, BURDEN, AND FATIGUE

ENCUMBRANCE

Certain types of armor and clothing will encumber the wearer. Add the Encumbrance values of any such items worn to obtain the Encumbrance Level. Encumbrance reduces Coordination.

BURDEN

Burden is determined by the character's Strength against the weight of items being carried. Items worn on the torso count for only half of their normal weight. On the scale below, compare the two to obtain the Burden Level. Burden reduces Coordination and Manual Dexterity.

Weight Carried (in kg)	Burden Level
Strength or less	0
greater than Strength	1
greater than 2 x Strength	2
greater than 3 x Strength	3
greater than 4 x Strength	4

FATIGUE

Fatigue is caused by various exertions and injuries detailed below and can be relieved by resting. A character's maximum number of Fatigue Points (i.e., 3 x Stamina) can be divided into six equal levels, and as his number of current Fatigue Points falls he suffers a progressively higher Fatigue Level. Fatigue reduces ALL characteristics.

Fatigue Points	Fatigue Level
5/6-maximum	0
4/6-5/6 maximum	1
3/6-4/6 maximum	2
2/6-3/6 maximum	3
1/6-2/6 maximum	4 (exhausted)
1 point-1/6 maximum	5 (unconscious)
No points at all	DEAD

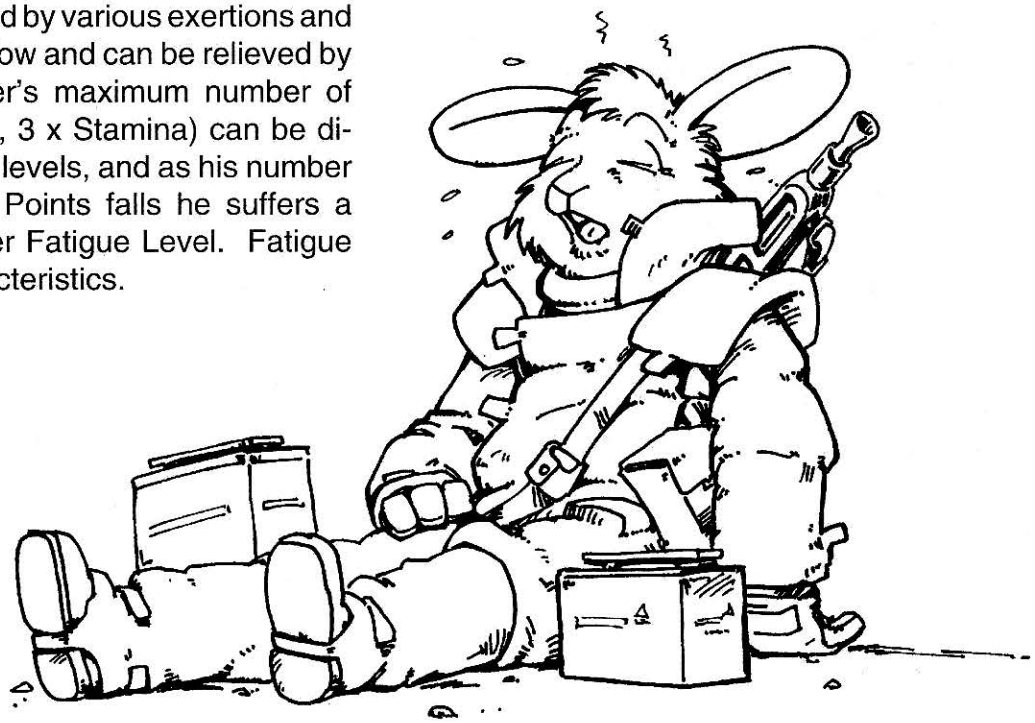
How Fatigue Is Lost

Movement or exertion, especially when burdened.

Melee combat
2 points/turn if fighting offensively
1 point/turn if fighting defensively

Other physical hardships, e.g., hot sunshine, walking through snow, prolonged physical effort.

Minor: A failed Stamina Check adds one Fatigue Level.



Major: Automatically adds one Fatigue Level, and a failed Stamina Check adds another.

Non-recoverable Fatigue is sustained through certain injuries and cannot be regained except by long recuperation, usually after the game.

How Fatigue Is Regained

Resting: 2 points/turn.

Walking: 1 point/ turn.

Resting or walking: If Burden Level is more than 2 or if character is wounded more than a graze (e.g., bleeding), 1/2 point/ turn.

For long term fatigue recovery, when not in combat, Fatigue is regained at the umpire's discretion.

EFFECTS OF ENCUMBRANCE, BURDEN AND FATIGUE

Chart Number Modifiers

Penalty Level	0	1	2	3	4	
Encumbrance	0	-1	-2	-3	-4	Coord
Burden	0	-1	-2	-3	-4*	Coord+MDex
Fatigue	0	-1	-2	-5	-10#	All
						Cumulative

*Requires a Strength Check to carry item, or an Easy Strength Check simply to lift it.

#Requires a Drive Check to perform any action at all.

Note also that these modifiers can reduce Recoil Number, Actions per Turn and Initiative by their effects on the relevant characteristics. Calculate the modified scores of these values as if the chart number modifiers had been subtracted from the characteristic values.

CHARACTER GROWTH

EXPERIENCE POINTS

Experience points are given out at the end of each playing session, at the rate of one for every hour the session lasted. This should hold true even if the player's character was not actively participating and (at the umpire's discretion) even if the player was forced to sit in another room waiting for another player to be dealt with separately. (He's still earned it, if only for his patience!) The award may be modified up or down by up to 50%, depending on whether the umpire decided the player had played well or not, such as role-playing convincingly, solving problems intelligently, performing remarkable feats, dealing admirably with bad dice rolls, and getting into the ethos of the Albedo universe. (Modifying awards is best left to seasoned and tactful umpires.)

Experience points are spent at the end of the story (presumably when the characters have a chance to work on their training and development) in exactly the same way that points are used in character generation–for characteristics, skills, expertise, education, etc.

OTHER LIFE EVENTS

Between adventures, players can suggest to the umpire what significant changes their characters might anticipate in their lives, such as planning to start a family, enlisting in military college, or moving to a new colony world. Likewise, the umpire can negotiate or impose various life events with an aim to improving the "reality" of the scenario. One or more rolls on 2d6 may give guidance as to whether the fortune has been good or bad, 2 being the best outcome (gaining a lucrative promotion or falling madly in love) and 12 the worst (being run down by a truck).

Useful Concepts

Non-destructive activities: Players must be encouraged to have their characters fulfill themselves in non-destructive ways. Players could have their characters engage in intellectual activities such as publishing work in the Net (poetry, essays, games). They can also engage in sports (break up the heavy brainwork of an investigation with a practice bout of stick fighting–yeah!) A good adventure needs variety and background, just like any decent story.

Punitive duty: The EDF is fond of punishing misdemeanors with punitive duties. Characters who have offended the powers that be might find themselves assigned to doing the tasks that noone else wants.

NON-PLAYER CHARACTERS

In a properly constructed Albedo adventure, a large file of NPC's will be needed. Opponents, helpers and background characters must be created by the umpire as needed. Use the Disposition Chart to make these NPC's come alive.

Characters will develop relationships with the people around them. Games will benefit from the creation of an ongoing non-player character folio. Whenever the player characters run into an NPC with which they may have dealings again in the future, the umpire should write the details of the character down on a record card for future reference. The card should detail Ties and Antipathies formed with player characters and other NPC's, and any relevant information such as business deals, grudges and the like. Thus a growing collection of incidental acquaintances, enemies, subordinates and friends can be created, which will add a great deal of depth to an ongoing campaign.

The lack of "monsters", alien beasties and "wacky" environments in Albedo will cause campaigns to be oriented towards urban or space adventures. The basic premise of Albedo is that people are the major part of the game environment, so use them to give color and complexity to a world rather than odd atmospheres and carnivorous wildlife.

ROLE-PLAYING HINTS

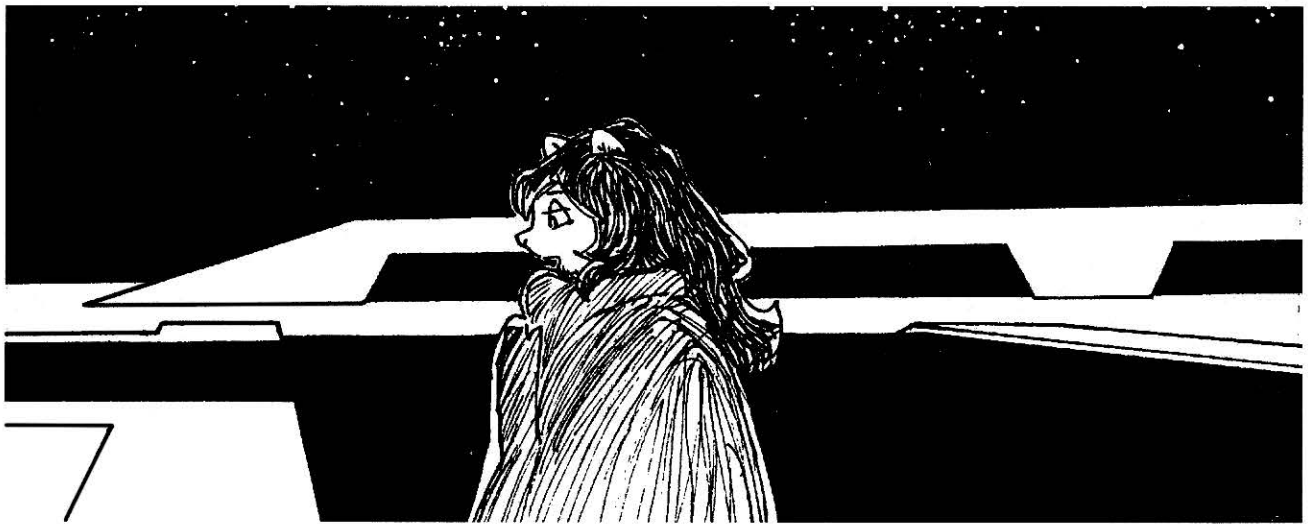
The Random Result Chart: On this page is a strange little item marked "Random Results." This is designed as a role-playing aid, finally formalizing an age-old technique which goes hand in hand with the "top of the head" school of umpiring. Whenever the umpire wishes to determine the result of an action or event which is influenced more by luck or random chance than by skill, a roll can be made on the Random Result Chart to get some idea of ensuing events. With a little imagination the random result chart can be used for everything from checking to see whether the characters get a parking ticket to seeing the results of showing a security guard a set of forged papers. Needless to say, all such rolls are made in secret and are definitely not to be shown to the players.

Random Results

Dice Roll	Result
2	Best possible result
3-4	Good result
5-9	Average expected result
10-11	Bad result
12	Worst possible imagined result

Harlequins: One method which can be used to add more variety to play is the use of a person aiding the umpire whose sole responsibility is the running of non-player characters. Dubbed the "harlequin", such a player can add a lot of spice to play, but must be carefully chosen. If the harlequin is not an imaginative and responsible person, then more harm will be done to the game than good.

In order to use a harlequin, roll the dispositions of an NPC, decide the Ties and Antipathies which are relevant to the situation, detail out any useful equipment which the character has access to, and brief the harlequin on how you want the character to be run. Give the harlequin full control over the character, but feel free to assist the harlequin however you deem appropriate. As umpire, you have the right to veto any of the harlequin's actions, but this should not be necessary if you choose your harlequin player carefully to begin with.



COMBAT

When a combat situation arises, the rules become more complex than the rules used for simulating tasks and interpersonal relationships.

Firstly, the passage of time is broken into turns. A turn lasts from 3 to 5 seconds. Each turn is divided into six sections, or phases.

Secondly, the exact position of all characters and the layout of the setting (e.g., buildings, furniture, trees) becomes important. A map or diagram, or a miniature reconstruction with pieces or models, is very useful here.

TURN SEQUENCE AND INITIATIVE

All turns are split into six phases. A character may perform various actions during a turn.

Note that each character has a rating for Actions per Turn, with a value generally ranging from 1 to 5 (occasionally it can be 0). This specifies the number of things he can do. It will also determine when he can do them, as shown on the Action Sequence chart. An "X" on the chart indicates an action can be performed during that phase. Thus, characters may perform Coordinate Actions (i.e., single actions which take one combat phase each to perform) in one to five of the six phases of a turn.

Action Sequence

		Phases in the Turn					
		1	2	3	4	5	6
"Actions	5	X	X		X	X	X
per	4	X		X		X	X
Turn"	3		X		X		X
Rating	2			X		X	
	1				X		

As can be seen from the Action Sequence chart, this will usually decide the order in which characters take their turns. The umpire will announce each phase of the turn, and all characters who are eligible to act within the phase will then announce what action they intend to perform.

If the chart has characters performing actions during the same phase, the turn sequence will be determined by Initiative + modifiers, the highest going first. Since all characters will have already announced their intentions beforehand, the one who goes first will be doubly advantaged. In the case of a tie, the characters act simultaneously.

Initiative Modifiers

Firearm Handiness
- Rating: Very Handy 0
- Handy ..... -1
- Average ..... -2
- Cumbersome ..... -3
- Very Cumbersome ... -4

Drawing gun from holster ..... -2
Drawing longarm slung on back ..... -4
Character is running ..... -2
Wild burst ..... +1
Character has already taken aim .. +2
Melee weapon against longer melee weapon ..... -1
Melee weapon against firearm ..... automatic loss*
Indirect fire against direct fire ..... automatic loss
Following a leader who makes a Tactics Task or Challenge ..... +/- number of Result Grades

*Characters attempting melee against opponents armed with firearms will always lose Initiative unless attacking with surprise.

Leadership Effects

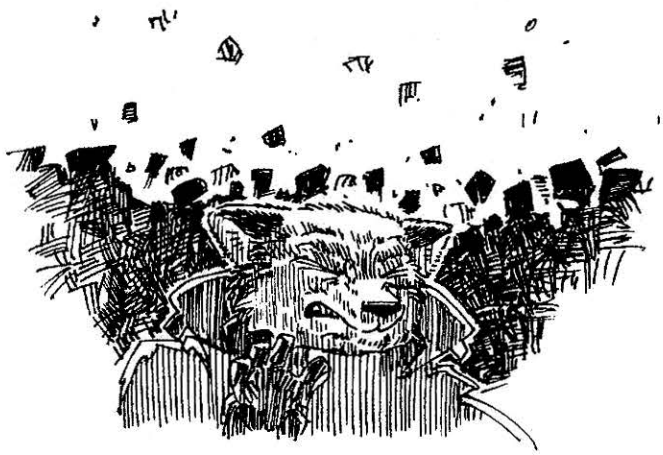
The tactical skill of a leader of a small group of combatants may well have a bearing on the Initiative scores of his followers. The leader must be in touch with his followers' situation (by direct sight or voice or indirectly via another person), and they in turn must have some level of Tie with their leader.

At the beginning of any combat turn, a leader may choose to use his Small Unit Tactics Skill. The cost is two actions. The roll is a Skill Challenge (against Skill of the opposing leader) or a Skill Task (if the other does not apply). The Result Grades add or subtract from the Initiative scores of the followers.

A leader higher up the chain of command may have a bearing on the Small Unit Tactics Skills of a number of leaders of small groups under his control. The "coaching" of subordinate leaders requires constant monitoring of communications traffic between the leaders and their troops, as well as situation appraisals from all subordinates.

Actions

The following are examples of Coordinate Actions, which take up one of the character's available actions in a turn and occupy one phase:



Taking aim with a weapon
Taking careful aim with a weapon (extra)
Firing a weapon
Striking in melee combat
Priming a grenade
Throwing a grenade
Removing an empty magazine
Fitting a new magazine
Clearing a gun chamber
Falling prone
Standing up
Walking 2m
Running 10m
Sprinting 20m
Communicating (verbally, by hand signals or equipment)
Observing surroundings

Note that a character may perform an action such as firing, observing or communicating while walking or running but not while sprinting. A character who is walking, running or sprinting may not take careful aim.

Remember to take account of fatigue loss during movement.

Coolness under Fire

In some situations a character's Coolness under Fire may be tested. This is managed as with any other Skill Check. Modifiers include +3 for every friend nearby (within 10m), up to a maximum of +9. A failed roll causes the character to duck or flinch, hide behind cover and lose actions equal to the number of Failure Grades.

Examples of events which may require a Coolness under Fire roll include:

Being fired on for the first time in this combat
Being fired on–near miss
Commencing melee combat
Enemy suddenly appears
Companion suddenly killed or wounded

MISSILE COMBAT

Sequence of Missile Combat

1. Initiative
2. Performing actions–Rolling to hit
3. Checking hit location
4. Checking armor penetration (if relevant)
5. Checking damage

1: Initiative (see page 18)

Shots per turn

Normally a character gets only one shot or burst per action, unless using rapid fire, in which case two shots per action can be fired from a single shot weapon (at the same target) in one action.

Normally, one action must also be spent aiming before each shot to avoid an adverse modifier.

Recoil Value

Generally a character can only fire his weapon if his Recoil Number is at least equal to the weapon's Recoil Value. Firing a more powerful weapon costs one Fatigue Point per point of excess recoil.

Firing a more powerful weapon may also be difficult if the character wants to fire more than one shot per turn. Roll a Strength Check against (3 x Recoil Value). A failure causes the character to stagger backwards and lose actions equal to the number of Failure Grades.

Weapon Recoil Values

Weapon	Recoil Value
4mm pistol	0
6mm pistol	0
8mm pistol	1
10mm pistol	2
12mm pistol	3
4mm longarm	1
6mm longarm	2
8mm longarm	3
10mm longarm	4
12mm longarm	5
16mm longarm	6
Shotgun	4
Wild burst	+1

Ignore recoil for tripod-/bipod-supported weapons.

2. Roll to Hit

This is a Skill Task for the relevant weapon. (A thrown grenade is a Manual Dexterity check.)

Range Difficulty Numbers	
Close	5
Short	10
Medium	15
Long	20
Extreme	25

Chart Number modifiers include:

Attacker Modifiers	
Running	-5
Not taken aim	-8*
Taken aim (takes one action)	0
Careful aim (two actions)	+5#
Controlled burst	+2
Wild burst at close range	+5
Wild burst at short range	+2
Specific shot	-5
Indirect fire	-5

*Unaimed fire at long or extreme range will always miss.

#Careful aim cannot be used on a fast-moving target (sprinting/evading) or while using wild bursts or indirect fire.

Target Modifiers	
Moving slowly (walking/running)	-2
Moving fast (sprinting/evading)	-5
Partially obscured	-2
Mostly obscured	-5
Large (e.g., vehicle)	+5

A miss with a grenade causes it to land off target by (10 x number of Failure Grades) meters. A Close Success indicates it has landed within five meters, and a Good Success or better indicates a direct hit.

Automatic Fire

Automatic fire is divided into two types: controlled bursts of four rounds at a single target, and wild bursts of about eight rounds at a single or multiple targets.

Controlled Bursts: Deliver a single damage roll against the target to a single hit location.

Wild Bursts: Roll to hit as normal. If successful, then 1d6 hits have been scored. Each is of the same Success Grade. Halve the number of hits achieved when shooting at medium range or farther.

Weapon Breakdowns

A natural 12 on a Roll to Hit may result in a stoppage or a jam. Roll on the following chart.

Weapon Breakdowns	
2d6	Result
2-6	no effect
7-10	stoppage: 1 action to clear it
11-12	jam: MDex check each turn to clear it. Two failures mean that special tools will be needed to clear the breach.

3. Hit Location

See the Hit Location Chart (page 61).

A specific shot may be aimed at one body section. This additionally gives +1 penetration.

4. Armor Penetration

The damage suffered by a character hit by a missile weapon in combat may be modified by the armor worn on the hit location of the body.

Armor has two aspects:

Penetration Resistance. The armor's ability to resist penetration by a sharp weapon. Blunt or impact weapons (e.g., club, boot) do not check for penetration but fail automatically. If more than one layer of armor is used, take the highest value only.

Impact Distibution. The armor's ability to dissipate the energy and thereby reduce damage from a hit by a high energy weapon. Low energy weapons (e.g., grenade fragments, knife) do no damage if they have not penetrated. If more than one layer of armor is used, take the sum total of the values.

All penetrating weapons are rated with a **Penetration Value**. All armor is rated with **Penetration Resistance Value**.

When a character is hit, calculate:

Number of Success Grades of hit	+	Weapon's Penetration Value (plus modifiers) [Never less than 0]

If this is greater than the Penetration Resistance Value of the armor, then the weapon has penetrated it.

Penetration Values and Modifiers

Caliber 10mm or greater	+1
Carbine	+1
Grenade	0
Knife	0
Pistol	0
Rifle	+2
SMG	0
Long or extreme range	
Dart ammunition	-1
Non-dart ammunition	-2

Armor Penetration Resistance Values

	Pen.Res.	Imp.Dist.
Ballistic jacket	1	1
Ballistic vest	2	2
Battle helmet	3	2
Civilian vacc suit helmet	2	0
Flak armor*	3	3
Helmet liner	0	1
Hostile environment suit	2	3
ILR ballistic armor	2	3
Military vacc suit helmet	3/1/2#	3
Torso supporter	1	1
Vacc suit	2	1
Vacc suit liner	0	0

*Throat is protected if collar is done up.
#Skull/Upper face/Lower face.

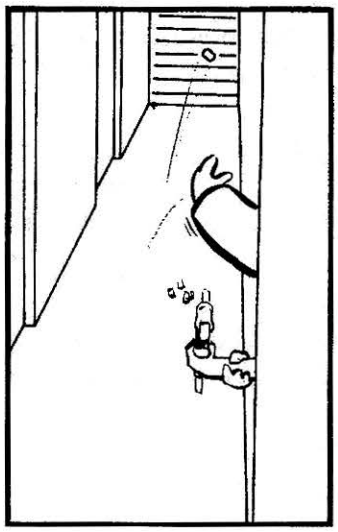
5. Damage

See Damage (page 62).

MISSILE COMBAT "FAST TRACK"

To simplify and streamline combat in a major firefight, the umpire may wish to shortcut the rules procedures by using assumptions or approximations, for minor NPC's only (usually the enemy, when they are behaving more like targets in a shooting gallery than characters whose individual intentions have any special bearing).

• Give them all equal characteristics. Usually only MDex (weapon skill governor), Coord (Actions per Turn), and Intuition (Initiative) are important.



• Give them all the same weapon and skill level.

• Give them all the same armor with a single Penetration Resistance Value for the whole body.

• Make them all perform in the same manner (e.g., all single shots, all ducking and advancing).

• Roll only for armor penetration, and ignore hit location and damage. Treat them either as fully functional or as out of combat.

• From here, elaborate on any details you may feel will add the necessary variety at the appropriate moments. For example, enemies who have been neutralized will not necessarily be found to be dead once the characters approach them after the shooting.

VEHICLE COMBAT

Vehicles are an important aspect of many adventure scenarios. In addition, military units are noted for their fondness for large and unfriendly vehicles bristling with weapons. Thus Albedo would be incomplete without detailed rules for vehicle combat.

MANEUVERING

Vehicle movement speeds are detailed under the basic chassis types (see Vehicles, page 84). A vehicle moves one meter per turn for every kph of speed. Maximum speeds are reduced for ground vehicles crossing rough terrain. Movement rates are halved for wheeled vehicles, quartered for hover vehicles, and 3/4 normal rate for tracked vehicles.

COMBAT

Vehicles fire in the normal manner, using the normal action system. The reloader on semi-automatic guns and gun/mortars takes two phases to reload the weapon after each shot. Automatic arms fire precisely as described in the main rules. Aiming, firing and the like all use up the gunner's actions, just as in normal interpersonal combat.

Hits are made by rolling the gunner's skill versus the shot difficulty. When firing a missile at a target, the shot difficulty is not determined by range, but by the skill of the enemy driver. Roll the gunner's skill versus the enemy's driving skill. If the target is moving at a speed faster than its "turning" speed, then halve the driver's effective skill rating.

The Initiative of a ground vehicle is taken from the gunner/commander's Initiative dice score. The Initiative of air vehicles is that of the vehicle's pilot.

Vehicle Weapon Ranges

	Short	Medium	Long	Extreme	Indirect
Auto cannon	500	1000	2000	3500	
Beam weapon	1000	2000	4000	8000	
Grenade launcher	50	200	300	500	1500
Gun/Mortar	100	500	1000		5000
Hyperkinetic Guns	500	1000	3000	4000	
Machine Gun	50	200	300	600	
Machine Gun (heavy)	50	300	400	700	
Machine Gun (sustained fire)	50	300	500	800	

Auto cannon, hyperkinetic guns and beam weapons roll to hit using the "Dart Ammunition" column of the shot difficulty chart.

Vehicle Combat Modifiers

Target is within 20 meters	-2
Target is large (light, high performance or heavy aeros, heavy GEV's, etc.)	-1
Target travelled at 40-60 kph this turn	+1
Target travelled at 61-80 kph this turn	+2
Target travelled at greater than 80 kph this turn	+3
Non-auto cannon/beam weapons vs moving aircraft	+2
Target is partially obscurred	+1
Firer moved during this turn	+1
Firer jolted by rough terrain, uneven going or landing	+1
Externally mounted MG's or GL's firing from moving vehicle	+1
Turreted arms firing in a phase in which the turret shifted its covered arc	+1

Vehicle Hit Location

Area Struck		Systems Contained	Compartment Affected
Ground vehicles			
Frontal hit:			
1-3	Turret*	Weapons	Fighting compartment
4-7	Hull front	Computer, sensors	Crew compartment
8-10	Suspension	Wheel motors	N/A
Side hit:			
1-2	Turret*	Weapons	Fighting compartment
3-4	Hull front	Computer, sensors	Crew compartment
5-7	Hull rear	Power plant	Crew compartment
8-10	Suspension	Wheel motors	N/A
Aerodynes (frontal hits use a DRM of -2)			
1	Forward fuselage	Weapons, sensors	N/A
2-3	Cockpit	Computer	Cockpit
4-5	Power compartment	Fusion power plant	N/A
6-7	Thrust vents**	Thrust vents	Cargo compartment
8	Fuel tank	Hydrogen fuel	Cargo compartment
9-10	Main fuselage	N/A	Cargo compartment

*A roll of 1 is a miss if the target is of "Low Profile" turret configuration.
**Hit locations 6 and 7 on helicopters counts as hits to the rotor assemblies.

Battle Management Systems

Military air vehicles and most AFV's normally have a small AI battle management computer as part of their complement of equipment. The computer acts as an additional member of the crew, handling the tasks of routine communications, damage reports and all around observation, using a characteristic score of 12 in all relevant fields. A vehicle computer may perform up to three missile, communication, or observation actions during a turn.

A vehicle computer constantly monitors the bio readings of its vehicle's crew, and can take over the functions of the vehicle's gunner/commander and driver (or pilot) at need.

Computers make competent but unimaginative vehicle pilots. Given a set direction or objective, they will move the vehicle around blocking terrain and utilize cover as much as possible. Unless an organic crew member "coaches" the computer, it will be unlikely to make particularly cunning use of the surrounding terrain.

Aerodynes which suffer the loss of their computers will go out of control. The crew must eject, and the vehicle is lost.

In the role of gunner/commander, computers also suffer a few limitations. Computers have a basic Gunnery skill of 10, and their Intuition gives them Initiative dice of 1d6+1. At the start of each turn, an independently operating vehicle computer will define areas of threat: 90° arcs in which it currently suspects danger and a need for possible offensive response. Every arc so defined will subtract one

point from the computer's Initiative dice. A further point will be subtracted from the computer's Initiative score if it is also driving the vehicle.

Vehicle computers keep their crews appraised of the full extent of damage to the vehicle, and also help to fight internal fires and blow escape hatches. Many computers can automatically eject from a blown up vehicle.

Remote controlled weapon mounts are vulnerable to fire and are disabled by any hit which deals out six or more points of damage. Remote weapon mounts in a given area of the vehicle are struck if the hit location roll was the lowest possible roll for the area in question.

Penetration of vehicle armor is done in the usual way on the Comparison Chart. Once a vehicle is penetrated, roll on the normal Damage Chart. All vehicles are given a structure value which replaces the usual frame size DRM's on the Damage Chart. Once the type of damage dealt to the vehicle has been determined, consult the Vehicle Damage Effects Chart below for the results.

Armored vehicles will only receive shock results from heavy vehicle weapons. Shock results apply as normal (e.g., loss of fatigue and actions), but all crew may make a saving roll for their Coolness under Fire versus 10 to avoid the effects of a "stagger" or "stun" result.

Blowing Up

Vehicles with a heavy weapon may blow up with astonishing force as the ruptured tanks of propellant for the main armament suddenly detonate. Roll 1d6 on the second through fifth turns after the vehicle receives a "blown up" result. The vehicle will explode if a 5 or 6 is rolled (a twenty meter radius explosion much like a 240mm gun/mortar round). Vehicles which carried gun/mortar rounds add +2 to the blast strength of the explosion.

Damage to Crew

All vehicles contain a maximum of two crew compartments. On ground vehicles, these are the fighting compartment (in the turret) and the crew compartment (in the main hull). Aerodynes have a sealed cockpit compartment, and a cargo/passenger compartment in the main hull.

Vehicle Damage Effects

Graze: Roll a sturdiness check for one random system noted as being present in this hit location.

Light: Roll sturdiness checks on all systems noted for this hit location on the hit charts, and each crew member present in the compartment must save versus wounds.

Serious: Complete compartment destruction. All characters in the stricken compartment must roll a save versus wounds. Roll sturdiness checks on all systems noted for this hit location on the hit charts. All characters must roll a Coolness under Fire check in order to perform any actions other than bail out next turn.

Massive: Vehicle blows up. All characters roll a save versus wounds. Characters who fail to bail out will be burned in 1d6 locations.

Catastrophic: Vehicle blows up. All crew must make saving rolls to avoid wounds. Characters who fail to bail out will die.

When a saving throw for the crew is called for, dice rolls must be made for each crew member in the affected compartment to avoid either wounding or death. Ground vehicle/ helicopter crewmen in a second compartment will also have to make a saving roll with a -2 DRM, since although they were not in the affected compartment, the compartments are not sealed off from one another. This rule does not apply to aerodynes, which have their two compartments well separated and sealed.

Wound Saving Throws

Characters who are required to roll a saving throw versus wounds must roll on the following chart. If a wound results, allocate the damage to a random hit location.

Wound Saving Throws

Roll on 2d6	Wound Caused	Fatigue Loss
2-5	No effect	–
6	Graze	1d3
7	Light wound	1d6
8	Serious wound	2d6
9	Massive wound	2d6
10	Catastrophic wound	2d6
11-12	Dead	!

Wound Modifiers

Vehicle size DRM	+/- N
Character is wearing body armor	-1
Light vehicle hit	-1
Massive vehicle hit	+2
Catastrophic vehicle hit	+4
Serious starship hit in main cmprtmnt	+4
Character not in main compartment hit	-2

Bailing Out

Characters may always elect to bail out (whether they have failed a Coolness under Fire roll or not) by taking it as a task to perform during their next turn. Bailing out of a ground vehicle will test the character's Coord versus 10. If the vehicle still has a functional computer, then bailing out attempts are made at a DRM of -1. Bailing out of a moving ground vehicle causes falling damage to the characters (as if they had fallen 1m/10kph the vehicle is moving). Blown up ground vehicles will slow their full deceleration allowance before bail out occurs if their computers are still operating.

Aerodyne cockpits are usually isolated from the main cabin. The onboard computer will manage the ejection decision, blowing the cockpit crew free of the vehicle once it is too dangerous for the crew to remain on board.

Sturdiness Checks

All systems have a basic resistance to breakage which is referred to as Sturdiness. This number or less must be rolled on 2d6 to preserve the system's function once damage is taken to the compartment in which it is located.

Small arms fire may never cause sturdiness checks on military vehicle suspensions or turreted weapons systems.

Sturdiness Check DRM's

Vehicle Damage	DRM
Graze	0
Light	+1
Serious	+3

The extent by which a sturdiness check is failed will determine the amount of damage caused to the stricken system (see chart on page 51).

All vehicles have vulnerable suspension systems. When hit by anything heavier than HMG fire, vehicle suspensions must always check their sturdiness whether the weapon penetrates the vehicle's suspension armor or not. Failed Sturdiness checks under these conditions will simply downgrade the vehicle's maneuverability (drop maximum and turn speeds by 1/4).

Sturdiness Ratings

Vehicle System	Sturdiness
Computer system	7
Aerodyne control system	8
Sensor	7
Ground vehicle power plant	8
Fusion power plant (used in aerodynes)	9
Suspension system (allow the vehicle to move)	
Wheeled	Number of wheels
Tracked	8
Hover configuration	7
Aerodyne thrust vents	1/2 the vehicle's structural value
Weapons	
Machine gun	5
Grenade launcher	5
Cannon	7
Gun	9
Hydrogen fuel tank	6

Sturdiness Check Failure Effects

Damaged System	Roll Failed by 1-2 Points	Roll Failed by 3+ Points
Computer	Computer shutdown	Computer shutdown
Hydrogen fuel	Vehicle forced down	Automatic "massive" hit
Power plant	Vehicle loses all power	Automatic "massive" hit
Thrust vents	Maneuverability downgraded (1/2 turn speed, 3/4 max speed, -3 maneuver rating)	Roll 1d6: 1-4 Vehicle forced down 5-6 Vehicle blows up in 1d6 turns
Weapons	Weapon destroyed	Automatic massive hit if weapon was gun, cannon, gun/mortar or grenade launcher
Wheel motors	1/2 turn speed, 1/2 max speed	Vehicle halted in place

Air vehicles which are forced down may be piloted in for a crash landing. Roll the pilot's skill versus 10 (or 15 in rough terrain) to avoid complete disaster.

Vehicle Sensors

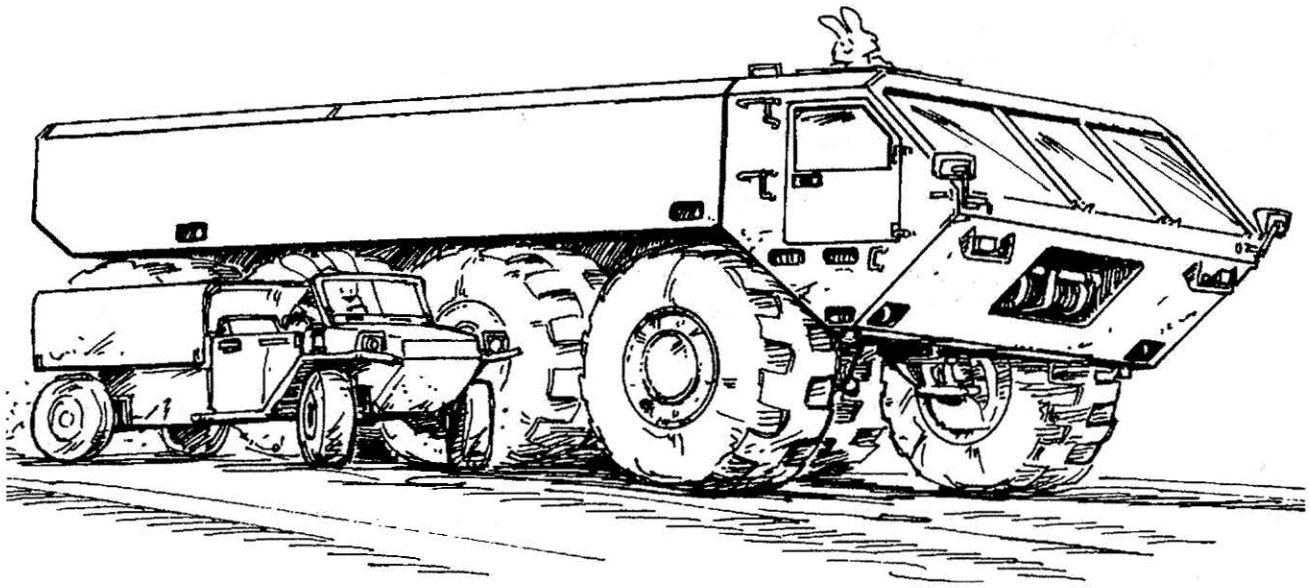
Military armored vehicles, air vehicles or scout vehicles will usually have a variety of sensor systems installed. Standard sensors include EM detectors, ground surveillance radar, thermal imaging equipment, and ground vibration detectors. Most line of sight detection systems can operate through an extendable periscope. Some specialist vehicles will have air tracking radar to allow effective anti-aircraft fire.

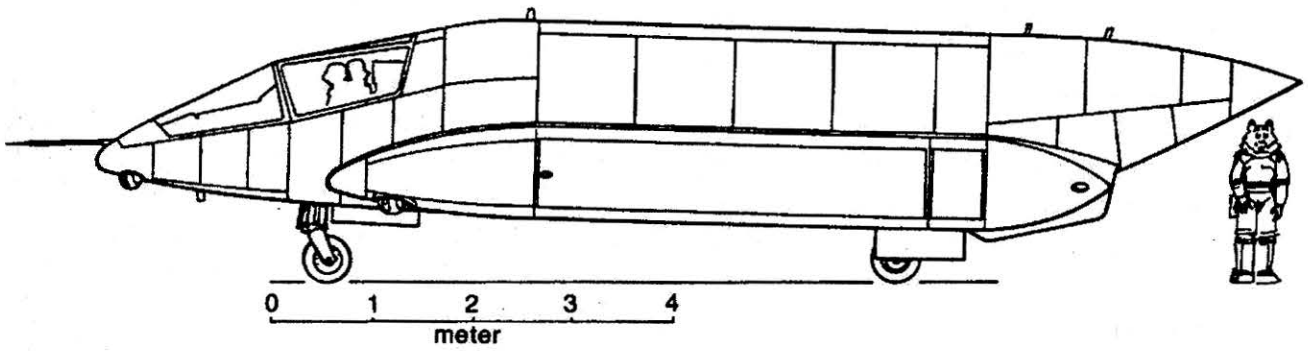
Vehicle sensors may be used in active and/or passive modes. Passive sensors can detect EM emanations (e.g., the fusion power plants in aerodynes) and active detectors out to about 10km, with an accuracy of 1/100 of the range to the target. Pinpointing military communicators or detectors is difficult, and requires a dice roll of 7- on 2d6. Passive sensors may register vehicle movement and firing in quiet areas, and give an indication of direction and range. Active sensors (radar) will spot moving vehicle-sized targets out to the limits of the vehicle's line of sight.

The sensors will usually be run by the vehicle's AI computer, and any relevant information is subsequently passed on to the gunner/commander and his driver.

Turrets

Turreted weapons cover a 60° arc, and may traverse through 60° (one hex face) per turn phase (i.e., turn through five hex faces per game turn). While turrets traverse before determining the vehicle's firing for a given game phase, an adverse accuracy DRM is applied to any shots fired in a phase in which the turret traverses.





AEROSPACE VEHICLES

Infantry small arms, infantry and vehicle missles, and ground vehicle cannon may fire at air vehicles. Combat between air vehicles is handled using the vehicle combat systems detailed above. Each "dogfighting" round uses the following procedure:

• Determine the final maneuverability score for each vehicle. Each aircraft is given a maneuverability rating in the Equipment specs (some vehicles require a well trained pilot to get the best out of the machine). Now compare the skill ratings of the pilots of each vehicle. The pilot with the highest skill level adds one to his maneuverability rating.

• Roll 1d6 for every point of final maneuver rating and note the score. The vehicle with the highest total is the aggressor, and the vehicle with the lowest total is the defender.

• Both vehicles now fire at one another. The aggressor may fire with all forward bearing weapons, and the defender with all rearward bearing weapons. All eligible weapons will fire once, testing versus a shot difficulty of 10 (aggressor) or 15 (defender). The aggressor fires first, followed by the defender if he survives the other vehicle's attack. Determine all damage, and then go back to step one if both vehicles still survive.

Highly maneuverable vehicles thus gain an advantage in a dogfight situation. Vehicles which dogfight during a turn may not fire upon ground targets during that same turn.

The cockpit crew of aerodynes must make a save versus wounds whenever the cockpit or hull front is breached, or when the fuel tanks blow up. If the cockpit is breached by an anti-aircraft missile, the cockpit crew dies–no saving throw! If the reactor blows, the crew will also automatically perish (unless the computer has sufficient warning to eject the crew). All other hits do not injure the cockpit crew.

SPACE COMBAT

Most starship combats are conducted between task forces which are maneuvering at very high velocities. Due to the enormous speeds and distances involved in space combats, we will not attempt to plot out starship combats on hexmaps. Instead, the following will detail out an abstract system which simulates the final encounter between two encroaching ships.

Ship-to-ship engagements are split into two types–those where the ships have rapidly converging vectors (termed a "pass"), and those where there is a minimal difference in vectors (termed an "encounter").

All ships have five main characteristics which will effect their performance in ship-to-ship combat: Ordnance, the number of ACV's (autonomous combat vehicles) that the vessel carries; Beam, the number and strength of the vessel's long range beam weapons; Point Defense, the ability of the vessel to knock down incoming ACV's with its beam weapons and short range defensive armorment (usually a mixture of beam weapons and hyperkinetics); Maneuver Rating, which encompasses the speed and agility of the vessel; and a Damage Modifier which represents the ship's ability to resist damage through the bulk of fuel and armor covering its vital systems.

Sample Ship Characteristics

Type	Tonnage	Ordnance	Beams	Point Defense	Maneuver Rating	Damage Modifier	Approx. Crew
Frigate	20kt	6	5	2	4	+1	12
Escort	40kt	8	8	1	3	0	16
Destroyer	50kt	16	10	2	5	0	20
Light Cruiser	80kt	20	12	2	5	-1	24
Cruiser	100kt	28	13	2	4	-1	30
G.P. Hull	10kt+	–	–	(2)	2	+3	4-10
Freighter C	20kt	(2)	–	(1)	2	+2	4-12
Freighter B	50kt	(6)	–	(1)	2	+1	6-24
Freighter A	100kt	(12)	–	(1)	2	-1	6-32

Crew: The actual crew count aboard a starship will vary widely depending upon the crew's social/emotional needs, often with little consideration for potential mission support requirements. Military vessels carry large crews to allow for attrition or special manpower needs.

SHIP DESCRIPTIONS

The ship characteristics chart covers the more commonly encountered "light" vessels. Major battle craft and VLCSV's may run well into the megatonnage range (a max of about 5km long x 1km wide).

Military Vehicles

Military starships are usually designed for high acceleration and durable structure.

Frigate: The smallest true starship, frigates are used for reconnaisance missions and scouting, combining a long range with a small defensive armament.

Escort: Fairly common vehicles which offer reasonable fighting power on a fairly cheap hull. Escorts are restricted to defensive/patrol duties. While having a reasonable range and

firepower, they are not designed to stand alone against true battle craft.

Destroyer: Medium weight vessels offering a well balanced combination of firepower, range and armament. Destroyers are probably the most generally useful class of ship in any navy, and lend themselves to a variety of tasks working independently and in flotillas.

Light cruiser: Larger ships which occasionally see use as flotilla leaders of small task forces. Light cruisers are often used in situations where a single ship is expected to operate independently in a possibly hostile area.

Cruiser: Large vessels capable of independent operations under all circumstances. Cruisers can carry small contingents of auxiliary vehicles and ground troops, and thus form a useful class of ship to dispatch on a variety of independent missions.

Civilian Vehicles

Freighters and general purpose hulls are often made of a semi-modular construction allowing them to splice together special features. They will only carry armament if specially fitted to carry it.

G.P. Hull: General purpose hulls are small ships used for shunting cargo or passengers across interstellar distances. They entirely lack armament, and are not particularly maneuverable, letting speed and maneuverability bow before economy.

Freighters: Slow, cumbersome vessels designed to shift large bulks of cargo across interstellar distances. Cargo space may be sacrificed for a limited load of ordnance, thus the armament values in parentheses on the Ship Characteristics chart.

COMBAT PROCEDURE

A ship's AI net can quite happily run all of the functions on a starship, with the living crew providing emergency back-up and creative tactics planning during the days of closing before an action. A crew's skills will mostly come into play when the computer suffers damage and requires aid from its organic assistants.

Military starship AI nets have a rating of 10 in all relevant skills (such as Pilot skill and Starship Weapons Deployment), and an Intuition of 10. Civilian hardware will have an Inituition and Pilot skill of 8, and normally lacks the correct data base to deploy weapons systems. One character may influence one attack or defense (ordnance offense/defense or beams), but a ship's AI net may handle any number of such tasks.

Phase 1: Ordnance Exchange

Initiative determination. Both ships test for initiative by rolling 1d6 and adding this to the skill ability score of the ship's Pilot or AI (whichever is higher). The vessel with the highest total wins the initiative.

Ordnance combat is resolved in a number of "rounds." The vessel which has lost the initiative will perform the first action in each round, giving the other player the advantage of seeing his opponent's moves before he performs his own.

Ordnance exchange procedure. Both vessels must record the amount of ordnance that they wish to commit to the up and coming combat (ships might wish to hold back an ammunition reserve to deal with targets in subsequent attack waves; see below).

The vessel which has lost the initiative will commit an amount of its total committed ordnance to an attack on the enemy vessel, and

this number is announced aloud. Next, the opposing ship announces what amount of its own ordnance is to be committed to blocking the attack. The amounts of ordnance committed to attack/defense are subtracted from each vessel's remaining ordnance total.

The attacker now rolls on the Comparison Chart, comparing the offensive versus the defensive ordnance, modifying the numbers by the Starship Weapons skills of the attacking and defending gunners. The defender may use his ship's Maneuver Rating to aid the defense.

A ship's Maneuver Rating represents the amount of ducking and dodging that the vehicle may split between defending itself from attacks in the current combat. Maneuver points are expended at need. The total amount of maneuver committed to the ship's defense in an entire combat may never exceed the vehicle's total Maneuver Rating.

The first vessel will now roll for the success of its attack on the Comparison Chart, matching the final offensive value of the attacking ordnance versus the final defensive value of the ordnance committed to interception. Ships which have a Point Defense capacity use this value as a DRM added to the enemy's attack roll, making it far harder to score a hit.

When the attack has been resolved, the second ship will now take the attacking role, and the procedure will repeat itself, completing the round. This cycle of rounds will continue until both vessels have used all of the ordnance that they wish to commit to this particular combat. All ordnance exchanges within a single round are assumed to be simultaneous. Do not resolve the damage caused by any ordnance hits until both combatants have rolled for the success of their attacks.

Phase 2: Beam Weapons Fire

Applicable only in ship-to-ship encounters, beam weapons fire is resolved after the ordnance exchanges are over. Ships with beam weapons must roll to damage their target by cross referencing their beam attack strength versus 10 on the Comparison Chart to score a successful hit on the target. Characters who have participated in controlling a missile attack or defense may not influence a beam weapon attack.

Both ships involved in the encounter now make a second initiative roll. The winner may elect to either disengage, or to initiate another phase of beam combat. If one vessel has a higher Maneuver Rating than the other, then it is granted a DRM of +1 for every point of Maneuver Rating by which it outclasses its opponent.

Damage Determination Procedure

For every successful hit scored on a ship, roll once on the table below:

Damage Determination

2d6 roll	Result
2-4	Light damage
5-7	Moderate damage
8-9	Severe damage
10+	Target destroyed

Spaceship Combat Modifiers

Condition	DRM
Ordnance hit from a pass attack	+1
Target's sensors or engines are knocked out (versus ordnance only) or the target is stationary	+2
Target is severely damaged	+1
3-4 points of ship's ordnance committed to the attack	+1
5-6 points of ship's ordnance committed to the attack	+2
7+ points of ship's ordnance committed to the attack	+3

Damage Results

Light damage: Randomly roll one ship's system on the following chart. This system will suddenly lose half of its current total value (rounding down).

Spaceship Damage

2d6 roll	Damaged system
2-5	Ordnance (reserve)
6-7	Beam weapons
8-9	Point defence
10+	Ship's sensors

Moderate damage: Roll once on the damage results chart. Another roll must now be made to see if the ship's computer net goes down (roll 9- on 2d6 to avoid this little disaster). In addition, crew casualties may occur. All personnel in one crew compartment must roll a save versus wounds on the appropriate chart in the Vehicle Combat rules (page 50).

The compartments on military ships include the following:

Compartment Penetration

1d6 roll	Compartment	Personnel Contained
1	Bridge	Pilot, navigator, gunnery chief
2	Auxiliary bridge	Backup bridge crew (the "second shift")
3	Engineering	Engineering/maintenance staff
4	Ship's services	Medical and administrative personnel
5	Weapons	Gunnery personnel
6	Cargo/passenger	Passengers, cargo, etc.

Ships which lack a particular compartment must roll again until struck in an area that they actually possess (e.g., fighters do not have a cargo/passenger compartment, and will roll again if a 6 is rolled for random compartment penetration).

Serious damage: Roll twice on the ship's systems chart, and roll for computer system shut down (7- to avoid computer failure). All crew members in one compartment must save versus wounds on the appropriate chart in the Vehicle Combat section on page 50. All occu-

pants receive the "serious damage DRM" on the Wound Saving Throw chart. The ship's engines will be damaged on a 7+ on 2d6.

Target destroyed: Roll 1d6. On 1-5, the target is totally blown apart. On a 6, the vessel is still an intact mass (beam weapon hits have a +1 DRM). Roll 2d6 for each character on board; on a result of 2, the character will survive the initial hit!

Damage Results Explanations

Computer net goes down: Since ships have multiple computers and computer backups, this event is not a total disaster when it occurs as a damage result. The computer's effective characteristic ratings will drop depending on the number of actions that the computer must perform:

Computer Skill Rating	
# Actions	Characteristic level
1	10
2	8
3	6
4	4
5+	2

Thus it may well become advantageous for the ship's organic crew to take over a number of tasks to relieve the damaged computer of as much pressure as possible. If the computer suffers two or more hits, then its skill ratings drop to zero, and the crew must take over all major functions.

Engine damage: A ship's engines consist of a batch of small (relatively speaking) fusion reactors. When engine damage occurs, individual reactors will be knocked out, only partially degrading the vessel's acceleration/maneuvering. Roll 1d2 whenever engine damage occurs, and subtract the result from the target's Maneuver Rating.

If a ship's engines are damaged to the extent that the vessel's Maneuver Rating drops to zero or below, then the ship loses power. The ship's drives will take days or weeks to fix. In an encounter battle, this means that the beam weapon exchange may be prolonged as long as the one remaining ship which is still under power chooses to extend the engagement, since the unpowered vessel can not elect to disengage. Most vessels will have enough stored power to continue beam combat for two rounds (three for cruisers) after losing power.

Multiple Ship Engagements

When either or both sides in a ship-to-ship conflict has more than one ship at hand, the players controlling them must decide upon their basic deployment before battle. Ships are deployed in one or more waves, and the individual ships in each wave may commit ordnance into joint attacks on enemy vessels, or may contribute ordnance to the defense of one of their own number. Battles between successive waves are treated as separate engagements, which are not adjudicated until after the end of the previous combat (or when three turns of beam combat phase have passed in an encounter).

Example:

A destroyer finds itself facing three frigates deployed into two waves (the first is two ships, and the second is the remaining vessel). A combat is now held between the destroyer and the two frigates in the first wave, both of whom may add their ordnance into joint attacks on the destroyer or conduct two individual attacks in each phase. When the combat ends, and if the destroyer is still operable, it will then have to conduct yet another combat against the frigate in the second wave (we can only hope that the destroyer captain held back a few ordnance points from the first encounter!)

MELEE COMBAT

Melee combat may be fought armed or unarmed. The two relevant skills are Melee (Armed) and Melee (Unarmed). The combat rules, as for missile combat, involve:

1. Initiative
2. Performing actions (including blows and other attacks, which are Skill Tasks and Skill Challenges and count as Coordinate Actions). Rolling to hit.
3. Checking hit location
4. Checking armor penetration
5. Checking damage

Note that melee weapons have numerical values according to length, from 0 to 3 (i.e., knife to long pole). A character without a weapon is counted as having a length value of 0. The difference in opponents' values is called the Reach Difference.

This affects combat in two ways:

- The character with a shorter weapon suffers -1 on initiative.

- The character with a shorter weapon suffers (-2 x Reach Difference) on attacks at the beginning of combat. However, once he scores a successful hit, this modifier suddenly applies to the other character, until reversed again by another hit, and so on, back and forth.

Hit Location

See Hit Location Chart (page 61).

For a bite, treat any roll greater than 3 as 3.

Armor Penetration

See Missile Combat (page 45).

Damage

See Damage (page 62).

Melee Combat Modifiers

	Length	Penetration Value	Damage
Axe	3	1	+2
Bite	0 (1 for ratites)	0	-1 (0 for carnivores)
Club	1-2	0	0-+1
Fighting stick	1-3	0	+1
Heavy knife	1	1	0
Kick	2	–	-1 (to lower body only)
Knife	0	0	0
Machete	2	0	+1
Pistol butt	0	0	0
Punch	0	–	-2 (+1 for hoof)
Rifle butt	2	0	+1
Wing buffet	2	–	-3

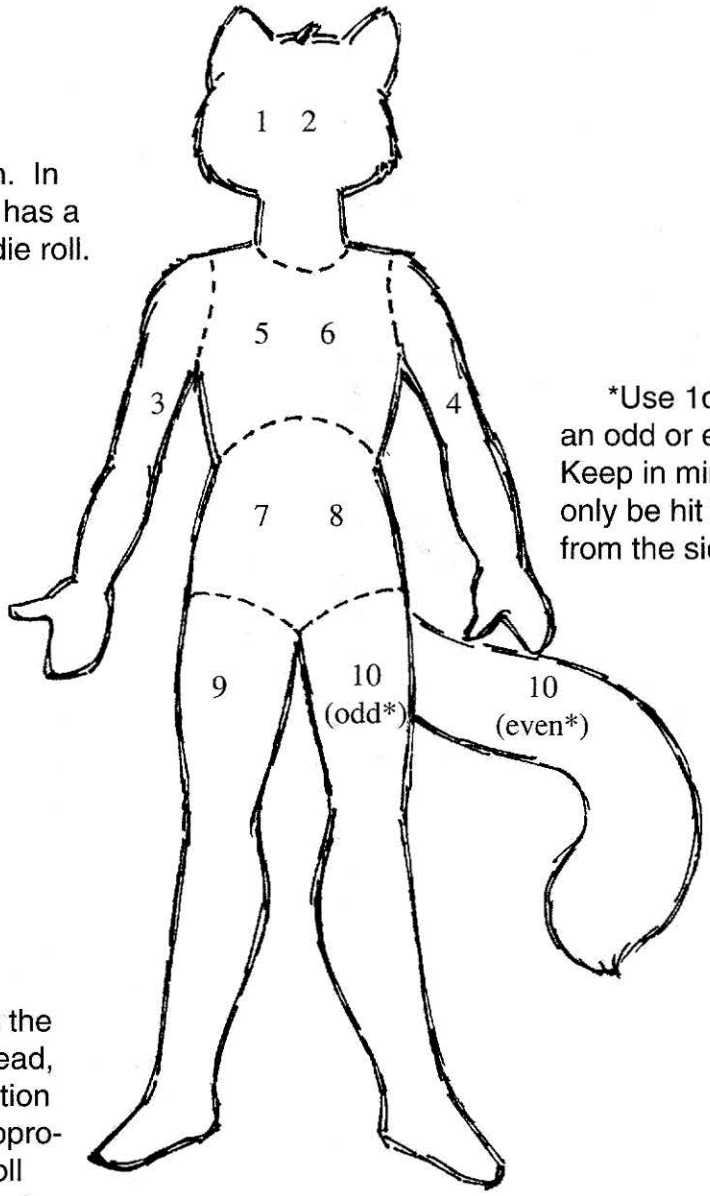
Melee Combat Actions

Action	Challenge	Modifier	Cost*	Effect
Evade	(miss one action)	0	0	-2 to be hit
Grapple	Coord	0	2	Stops opponent's attacks and allows other actions
Strike, defensive	Skill	-2	1	Normal strike plus -2 to be hit in return
Strike, offensive	Skill	0	2	Normal strike
Strike, specific	Skill	-5	2	Nominate hit location
Throw object	Coord	0	1	Normal strike to 50+(Strx2)m
Trip	Coord	-7 (-2 if opponent larger)	2	Stagger
Actions while performing grapple				
Bear hug	Str	0 (-5 if opponent larger)	2	Causes 2 Fatigue injury
Bite	Melee (Unarmed)	+2	2	Normal strike (see page 105)
Break limb	Str	-5	2	Serious Impact Wound
Lock	Skill	0	1	Immobilizes; opponent drops weapon
Strangle	Melee (Unarmed)	0	1	Causes 5 Fatigue injury
Strike	Skill	+2	2	Normal
Throw	Melee (Unarmed)	0	1	Column 4 damage
Throw#	Str	0 (-5 if opponent larger)	2	Column 4 damage
Trip	Coord	0 (-5 if opponent larger)	2	Stagger
Actions while subject to grapple				
Escape grapple	Coord	-5	2	Grapple is broken
Grapple	Coord	0	2	Allows grapple actions
Strike	Skill	-5	2	Normal strike
Trip	Coord	-7 (2 if opponent larger)	2	Stagger
Actions while subject to lock				
Escape lock	Skill	-10	2	Lock is broken

*Fatigue Points per turn. These actions all cost Fatigue Points. At the end of each turn a character will lose Fatigue according to the highest of the costs (i.e., 0 to 2), not the total.
#Use this Throw only if the character does not have the Malee (Unarmed) skill.

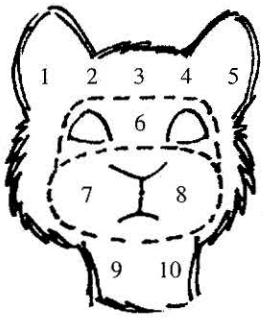
Hit Location

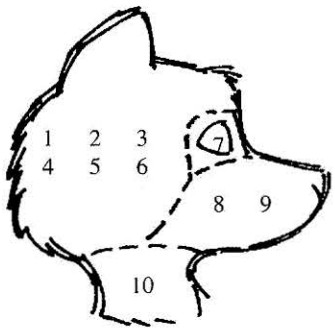
Roll 1d10 for hit location. In melee combat, if the target has a small frame size, add 2 to die roll.

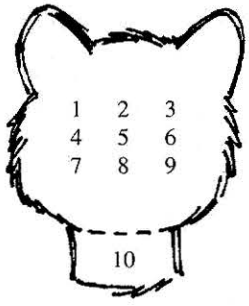


*Use 1d6 to generate an odd or even number. Keep in mind the tail can only be hit by attacks from the side or the rear.

If the die roll shows that the critter has been hit in the head, determine from which direction the hit came, consult the appropriate head diagram, and roll 1d10 for location on the head.







DAMAGE

Wounds affect the body in three ways:

• Tissue damage, which impairs the function of the injured part.

• Blood loss, which fatigues and weakens the body.

• Shock and pain, which tire the character and impair his ability to act.

DAMAGE MODIFIERS

Missile Combat Damage Modifiers	
Weapon	
Carbine	+1
Grenade fragment	0
Machine gun	+3
Pistol	0
Rifle	+2
Shotgun	+3
Sniper's rifle	+3
Submachine gun	+1
Controlled burst (close/short range)	+1
Caliber	
4mm	-2
6mm	-1
8mm	0
10mm	+1
12mm	+2
16mm	+3
Range	
Short	0
Close	0
Medium	0
Long	-1
Extreme	-2

Melee Combat Damage Modifiers	
Target's Frame Size	
Small	-2
Light	-1
Average	0
Solid	+1
Huge	+2
Hit Location	
Head	+3
Chest	+2
Abdomen	+1
Leg	0
Arm	-1
Tail	-2
Attacker's Strength	
0-4	-4
5-9	-2
10-14	0
15+	+2
Weapon	
Axe	+2
Bite	-1
Club	+1
Fighting stick	+1
Kick	-1
Knife	0
Machete	+1
Punch	-2

(For further examples, see Melee Combat on page 59.)

EXPLOSIONS (GRENADES, BOMBS)

The amount of damage suffered in an explosion varies with the strength of the blast and the distance from it. If it is from a grenade, the type used is also important. Fragmentation grenades cause a number of separate shrapnel wounds. Explosive fragmentation grenades also cause blast damage. Some other explosions may cause only blast damage.

Explosion Damage

Range	Shrapnel Hits	Blast Damage on Column 5, Modified
Direct hit	1d6	+4
0-5m	1d6	0
5-10m	1d2	-4
10-20m	1d2-1	-8

48mm grenades add +1 to blast damage.

Damage Determination

2d6 roll	Column 1	2	3	4	5
1	G/-	G/-	-/tm	–	–
2	G/tm	G/tm	-/tm	-/tm	–
3	G/st	G/tm	-/st	-/tm	-/tm
4	L/-	G/st	-/st	-/st	-/st
5	L/tm	L/tm	G/tm	-/st	-/st
6	L/st	L/tm	G/st	-/st	-/st
7	S/st	L/st	L/tm	-/st	-/st
8	S/kd	S/st	L/tm	G/tm	-/st
9	M/kd	S/st	L/st	G/st	-/st
10	M/ko	S/kd	L/kd	L/tm	G/tm
11	C/kd	M/kd	S/kd	L/st	G/st
12	C/ko	C/kd	M/kd	L/kd	L/kd
13	C/ko	C/ko	C/ko	S/ko	L/ko
14	C/ko	C/ko	C/ko	M/ko	S/ko
15+	C/ko	C/ko	C/ko	C/ko	C/ko

C: Catastrophic wound G: Graze L: Light wound M: Massive wound S: Serious wound
kd: knock down ko: knock out tm: tumble st: stun

Find the appropriate column

Column 1: Penetrating weapons (e.g., bullets, knives)
Column 2: Slashing weapons (e.g., teeth, shell splinters, machetes)
Column 3: Narrow point impacts (e.g., pointy end of fighting sticks)
Column 4: Impacts (e.g., punches, kicks, falls, explosions)

Note that Impact Distribution of armor will shift damage to the right one column per point of Impact Distribution on the affected part (if the armor was not penetrated). If this moves the damage past Column 5, then use Column 5 and apply a modifier of -2 for every further unit of column shift.

ADDITIONAL INJURIES

Falling Damage

Height	1d6 injuries up to maximum	Damage on Column 4, modified
1 meter	1	-2
2 meters	2	0
3 meters	3	+1
4 meters	4	+2
8 meters	5	+3
16 meters	6	+5

Burn Damage

Extent	Damage on Column 3
Mild	+1
Moderate	+2
Severe	+3

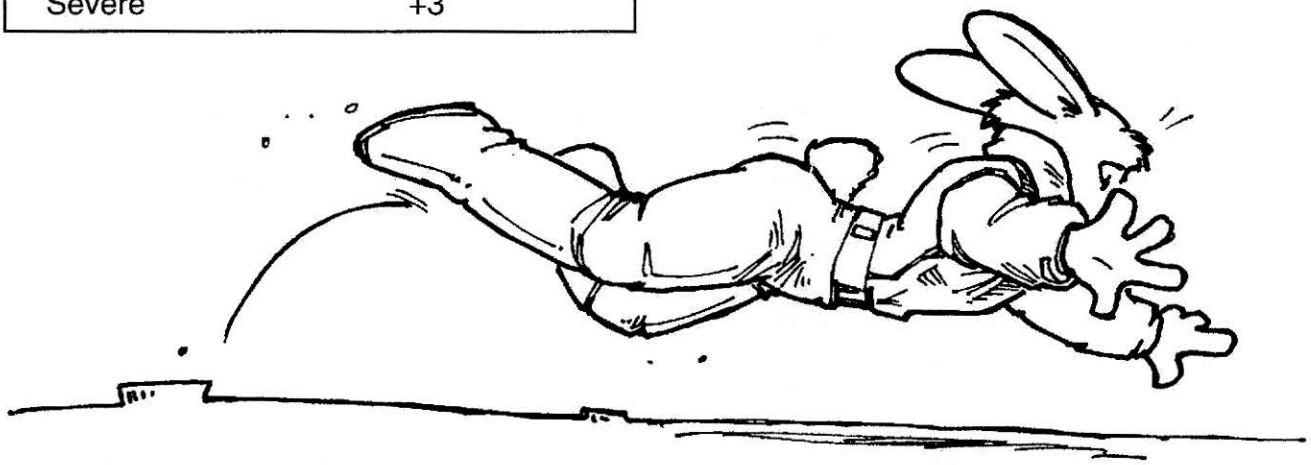
Vacuum Exposure Damage

Breach to vacc suit	Fatigue Points lost per turn (recoverable)
Minor puncture	1/2
Puncture (e.g., bullet hole)	1
Tear (e.g., knife slash)	2
Major breach	3
Full vacuum	4

Additional Vacuum Injuries

Roll once only: Fatigue + 1d6

10 Light chest wound
11 Light head wound (ruptured eardrums)
12 Massive chest and head wounds
13 Serious chest wound and blinded
14 Serious chest and head wounds and blinded



Any adverse modifiers resulting from wounds and shock should be noted on the player's record sheet. They affect certain characteristics only, depending on the body part injured. Remember that the resulting modifiers to characteristics will affect Skill rolls.

Head:	Reason, Intuition, Manual Dexterity
Arm:	Strength, Manual Dexterity
Chest:	Strength
Abdomen:	Coordination, Strength
Legs:	Coordination

Shock

Fatigue loss is recoverable, but fatigue loss from blood loss is non-recoverable.

When multiple hits occur, all wounds are cumulative but only the highest shock result is taken.

Effects of Wounds

	Modifier on Relevant Characteristic	Blood Loss (points per turn)
Grazes		
Shallow surface wounds or bruising.	-2	0
Light Wounds		
Painful but not disabling. Lose 1 fatigue/turn (recoverable) whenever moving or jolting the injured part.	-5	0
Serious Wounds		
Disabling. Lose 1 fatigue/turn (recoverable) whenever performing any action.	-8	1
Head: Recover fatigue at half rate		
Chest: Recover fatigue at half rate		
Abdomen: Cannot jump, run or sprint		
Leg: Cannot jump, run or sprint		
Arm: Drop any item		
Tail: Lose tail (kangaroo keeps tail; suffers as a leg injury)		
Massive Wounds		
Completely disabling. Take a Drive Check to perform any action. Lose 3 fatigue/turn (recoverable) whenever performing any action. Also lose one additional point of blood whenever performing any action. Recover fatigue at half rate.	-10	4
Catastrophic Wounds		
Even worse.		
Head: Killed instantly		
Chest: Killed instantly		
Abdomen: Killed eventually		6
Arm: Major fracture (as for Massive Wound)		6
Leg: Major fracture (as for Massive Wound)		10
Tail: depends on size (kangaroo suffers massive wound)		(8)

Note: Impact wounds (Column 4 or 5) only cause bleeding if the Roll to Hit was a natural 2. The bleeding is internal, and the maximum rate is 2/turn.

Effects of Shock

	Fatigue loss (once only)
Tumble: Staggered by the blow. Lose next action.	2
Stun: Dazed by the blow. Number of Actions per Turn halved for two turns and each subsequent turn until successful Drive Check.	4
Knock Down: Knocked off feet. Lose all actions for six phases, then continue as for Stun.	6
Knock Out: Lose consciousness for 1d6 turns and each 1d6 turns until successful Drive Check, then continue as for Stun.	8

BLOOD LOSS

Every point of blood loss causes the loss of one point of non-recoverable fatigue. Bleeding wounds may be staunched to halt blood loss. (This is a task, not a coordinate action.) First Aid skill is used, and a suitable first aid kit must be available.

Attempt to Staunch	Difficulty
Serious wound	10
Massive wound	15
Catastrophic wound	20

Attempt to Staunch	Modifier
Wound to chest or abdomen	-2
Internal bleeding	-5
No proper equipment (e.g., only strips of torn cloth)	-5

A successful Skill Task roll will stop the blood loss as long as the pressure bandage is kept on. A Close Failure will halve the rate of blood loss.

HEALING

Blood Loss/Tissue Damage Recovery

If the blood loss from a wound is kept at zero for a period of twenty minutes, no further losses are taken unless the character moves (unless carefully carried), is knocked over or is struck on the wounded part. Blood loss fatigue may be restored by a blood transfusion at the rate of 10 points per half hour.

A successful Stamina Check must be made before any healing may take place. Roll once per day until the roll is made. Once this is done, the character may begin to heal.

Take the average of the supervising medic's Medical Skill Governor and the character's Stamina. Roll this value against the Healing Difficulty Number, with modifiers for the Medical Skill level. A successful roll will lower the seriousness of the character's wound to the next category. The roll is made at the end of each week of rest (or fortnight of rest, if the character is placed under stress).

Wound Category	Healing Difficulty Number
Catastrophic	15
Massive	12
Serious	10
Light	10
Graze	8
Healed	

Shock Recovery

Fatigue points lost from shock are recovered in the normal way, i.e., by resting.

EQUIPMENT
GENERAL EQUIPMENT

SOURCES OF EQUIPMENT

In the inner ConFed, most individuals have a state-provided allowance. Individuals who desire additional income can engage in capitalist businesses or work for the state in service or administration. Individuals can petition the state for temporary access to costly goods and services for the good of the state or against future work credit. A citizen's basic allowance includes basic housing, food, medical support, primary and secondary education, and reasonable access to computer systems and information. The outer ConFed worlds and the ILR are far more capitalist, and thus most of the above-mentioned services will have to be paid for through an earned income.

The standard prices given below are for equipment produced in state factories. While state produced tools and equipment are practical and efficient, they are in no way "jazzy." Privately produced equipment may be of better or worse quality than state-supplied models, and tends to vary widely in price.

Military expeditions will normally have an "on hand" manufacturing capability which will be used to make equipment and weapons at need. While minor tools and equipment can be cobbled together in the workshops on most starships, the factories aboard VCLSV's are capable of mass producing very large and complex items indeed. Thus, the equipment listed below is often subject to a variety of local modifications and variants, and some of the equipment performances listed below could be modified in various ways given the correct resources, knowledge and skill.

Weights of all items are given in kilograms.

STARTING EQUIPMENT

A starting character could be expected to begin the game with 1d3 sets of clothes (which may be chosen from street, outdoor and work clothes), a hand computer, and 1d100 x 20 credits. The player character will have miscellaneous equipment suitable for the scenario in play, at the discretion of the umpire.

CLOTHING

Even though most critters come equipped with fur coats, clothing is still a necessity for most mammals due to the need for pockets, protection or simply because of nudity taboos (although there are a few worlds which are fairly liberal on this point). The exception to the above are avian characters, who will normally only wear decorative articles/rank badges and pouches, having neither the need nor the desire to wear clothes.

Clothing is bought as "outfits", comprising a full set of clothes, footwear, and a couple of changes of shirt and underwear. A full set of clothes weighs effectively nothing when worn, but masses two to three kilograms when packed.

Outfit	Cost	Encumbrance
Formal clothes	300-1000	2
Business clothes	200-500	1
Street clothes	120-200	
Work clothes	100-160	
Cold weather clothes	200-300	1

In addition to the above outfits, characters might wish to purchase an overcoat, cloak or jacket. These items may be had for between 50 and 150 credits, and weigh between one to three kilograms.

Clothing Styles

The illustrations throughout the rules give a pretty good indication of the current fashions in Albedo. Long tunics (sometimes skirt length for females), upright collars or "V" neck collars, loose sleeves and trousers are the vogue on the inner ConFed worlds, and the outworlds tend to follow inner ConFed fashions.

Jewelry confines itself to fairly broad pieces which will not be concealed by the fur. Neck bands and bracelets are thus more likely than delicate chains or rings.

EDF Uniform

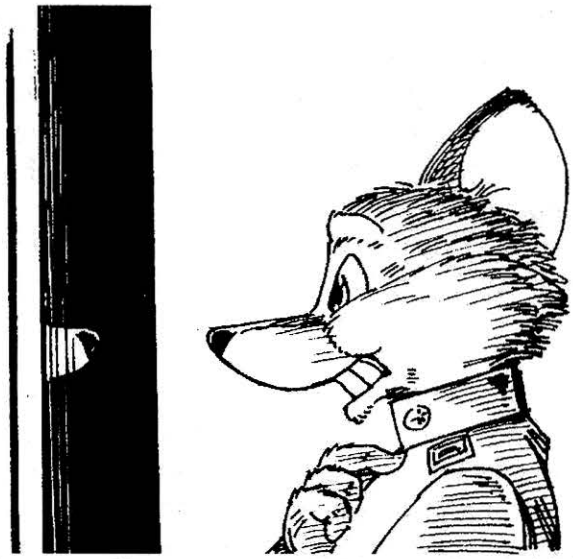
A brief description of the uniforms and equipment of the ConFed EDF is now probably in order. We will divide EDF uniforms into three types: combat uniform, starship crew combat uniform, and formal uniform.

Combat uniform: Green or camouflage fatigues and flak armor worn over a vacc suit liner. Gloves, boots and personal weapons complete the picture. All EDF troops who are expected to come near a fire zone will wear head protection.

Flak armors and fatigue suits are equipped with velcro tabs to allow the securing of equipment pouches to the soldier. A medical status display is always affixed to the armor's left chest. An infantry soldier will wear a battle helmet equipped with a short range communicator. Officers and AFV crews will normally have a vacc suit helmet (lacking the visor unit) and long range communication (LR comm) packet for air liaison and command coordination. Aerodyne crews will have full vacc suit helmets (visor unit included) and LR comm packets.

Starship crew combat uniform: Ship uniforms consist of comfortable fatigues worn over the ubiquitous vacc suit liner. Starship crew fatigues are normally well covered in velcro patches to facilitate movement in free-fall. Crew on combat alert will don vacc suit helmets and flak armor.

Formal uniform: Neat, high collared jackets of green (planetary forces) or blue (aerospace forces) topped off with forage caps are the normal "walking out" wear of EDF personnel. More elaborate formal mess gear or full



dress uniform are available, and would be worn at special functions or full dress parades.

Homeguard uniforms vary greatly from planet to planet, although most planetary forces will use body armor and helmets copied from the EDF model. Uniform clothing is not always based on EDF patterns, and headgear in particular tends to vary widely from planet to planet. Berets, kepis, peaked caps and glengarries have all found favor with various formations.

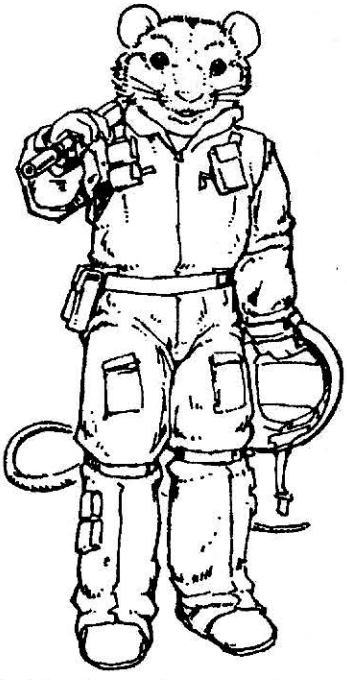
FOOD, DRINK AND LODGING

In an endeavor to encourage realistic play, it is important that the umpire does not forget that all characters must eat, drink, and have somewhere to stay. While the socialist governments on the ConFed's older central sys-

EDF utility overalls

EDF general duty uniforms

EDF formal dress uniforms



EDF battle dress

tems provide their citizens with basic housing and food (which includes rent and utilities), other environments may force characters to expend money to provide themselves with these assets. Depending on the quality, food and housing in the outworlds can be quite pricey. The food and drink section is also useful when someone decides to carouse or to take a client out to dinner. Remember that more money must be spent if the meal or lodgings are to be of high quality.

Food/Drink	Wt	Cost
1 day military rations	.2	6
1 week camping rations	5	30-50
1 week concentrated rations	2.5	70
1 week groceries	10	30-40
Take out food, snack	–	2-5
Take out food, meal	–	5-7
Resturant meal	–	8-25
Catering for a party	30	200-300
(Serves an average crowd of 20-30)		

Military "survival" rations are designed to support one being for one day. They consist of a selection of nutritional bars. Their taste leaves much to be desired, and they fail to properly create the illusion of being "full." On the third consecutive day of living on rations, penalize characters with the loss of one non- recoverable Fatigue Point (which will disappear as soon as the character eats proper food).

Lodging	Cost	Notes
1-person tent (1kg)	50-60	
2-person tent (1.5kg)	70-80	
3-person tent (2kg)	90-100	
Marquis tent (20kg)	200-250	1
Night at a traveller's hotel	20-50	
Rented flat, per month	350-450	2
Rented house, per month	400-500	2
Avg. monthly utility bill for a house	20	3

1. Sleeps 20.
2. Add 20 for every bedroom over two.
3. Add 5 per person in the house.

HOUSEHOLD GOODS

Household goods are essential creature comforts for any character. Entertaining a client in a bare room, or living in a bare apartment, can be both uncomfortable and embarrassing. State-provided housing and military quarters will usually come equipped with basic household goods.

Item	Cost
Minor appliance	50-200
(food processor, heater, ghetto blaster, etc.)	
Major appliance	400-1000
(fridge, TV, video, stereo, etc.)	
Furniture	500-1200
(lounge chairs, beds, etc.)	

BAGS AND CONTAINERS

The EDF has a standard baggage allowance of 16kg, including kit (not including vacc suits!). Umpires should keep a careful track of baggage weights and volumes.

Item	Cost	Weight	Notes
Backpack, simple	20-50	1	
Backpack, hiking	50-100	1/2	1
Backpack, military	50	1/2	
Briefcase	100-200	1	
Bumpack	10-20	1/4	
Canteen	10-15	1 (full)	2
Duffle bag	10-20	1/4	
Handbag	50-100	neg	
Jerrican	20-50	2	3
Magazine pouch	2-5	neg	4
Pocket	–	–	
Pouch	2	–	5
Purse/wallet	20-100	neg	
Shoulder bag	20-75	1/4	
Suitcase	75-150	1	

1. 2 encumbrance when carried.
2. Holds 1 liter.
3. Holds 20 liters.
4. Holds a max of 2 x 20 rnd magazines. Magazine pouches are usually "velcro'ed" onto a suit of body armor or combat fatigues.
5. Pouches of all sorts of sizes are commonly "velcro'ed" onto clothing.

INFORMATION

Information exchange and communications are the life blood of any technological society. Most societies allow citizens a basic allowance of public domain computer time and library access, which are readily hooked into through the average citizen's hand computer. This is supplemented by free computer "billboards", public debate nets and information exchanges. Player characters who wish to perform extensive research may have to pay for the additional access, and are referred to the following chart.

Item	Cost
Map or paperback book	6-10
Textbook	25-50
Minor software package	25-50
Major software package	100-300
Specialist software package	500-1000
Library access cost	2-5
1 use of public domain AI computer	5

Use of private newspaper/public debate nets costs 5 credits per month (access to the state nets will be free on socialist worlds). This gives the character ready access to current events and public opinions. For a charge of 20 credits, the character may purchase minor advertising space on a "newspaper" net.

TRAVEL

Movement and travel can be a major drain on anyone's budget (although the citizens of the socialist inner ConFed worlds will normally have a limited amount of free access to public transport nets). Please note that space travel is rather beyond the means of most people due to the prohibitive cost. Government or company subsidized programs are the only way most non-starship crew, colonists or military personnel will get to see far planets.

Travel Type	Cost
Train/bus trip within a city	1-3
Taxi trip within a city	5-20
Car rental, per day	40-60
Bus/train trip between cities	50-300
	(depending on distance)
Plane ticket between cities	300-400
Plane ticket between continents	500-800
Space travel within a system	2000-4000
Starship ticket	5000-10,000
Transport cargo by starship	500-1000/ton

COMPUTERS

Computers are a very common tool in Albedo's technical society. An individual's hand computer will serve as his newspaper, receive his mail, and perform a variety of other handy functions by remote linking into net or mainframe sources. Most bulk data is now stored on high density laser disk (storing the equivalent of perhaps a million pages of written text), and most computer memories are non-volatile (i.e., they retain their current memory when switched off). Computers will accept verbal or keyboard input.

Computer	Cost	Weight
Hand computer	100	neg
Portable computer	300	.25
Home computer	500-800	1
Mini processor	5,000	5
Processor core	10,000	6
AI core	50,000+	8
Bulk data storage disk	5,000	2
Database package	20,000+	5
Major system interface	10,000	2

Large computers and artificial intelligences are built up in kit form, with a core being linked into data bases and then mated to the systems which it is supposed to monitor.

MEDICAL EQUIPMENT AND SUPPLIES

Since people can get hurt, it is important to include the means of repairing physical damage. Despite the volume of medical equipment available, I can assure you that the ones your characters will get the most use out of will be bandages and pain killers–and this is as it should be. Medical skill is required for the use of any advanced equipment.

Medical Equipment

Field bandage
Cost: 1
Weight: neg
Description: Field bandages are used in the emergency staunching of wounds. They are commonly kept in pouches on soldier's webbing, and make a damned fine tea strainer.

First aid kit
Cost: 30-50
Weight: 1
Description: Contains constrictive bandages, field bandages, coagulant sprays, quick setting foam splints, and a set of slings for broken limbs, along with a variety of antiseptics, pain killers, antibiotics and an injection gun.

Medical status display
Cost: 100
Weight: neg
Description: Small display unit which attaches to the breast of a vacc suit or combat armor. A medical status display is designed to show the wearer's pulse, respiration, blood pressure and EEG readings at a glance.

Life support unit
Cost: 100,000
Weight: 40
Description: Life support units are designed to provide patient support for major wounds. As such, they replace lost blood, treat shock, and coordinate the efforts of a doctor and medical computer to best advantage. Give a -1 recovery DRM to any patients with massive or catastrophic wounds, or who have suffered severe fatigue from blood loss (+3 fatigue DRM or greater), if they are swiftly brought to a life support unit.

In near hopeless cases, life support units can hold a character in cold sleep until he can be brought to even better medical care. Characters who are in cold sleep survive the experience if they can successfully make a roll on their Stamina versus 10 (do not apply fatigue DRM's–let's give them a sporting chance . . .).

Common Drugs

DRUG	USE	COST
Pep pill	oral	1

Effect: Banishes 1d3 fatigue points for 3 hours. Takes 10 minutes to work.

Pain killer	oral	2

Effect: Removes the pain from headaches, grazing hits, etc. (reduces shock fatigue by 1 point). Takes 6 turns to take effect.

Coagulant	spray	5

Effect: Gives a -2 DRM to control bleeding.

Heavy pain killer	injection	5

Effect: Removes 2 points of shock fatigue after 4 turns.

Synaptic damper	injection	10

Effect: Removes 5 points of shock fatigue after 4 turns. Reduces all neuro-physical characteristics to 1/2 their original level.

A character may not gain benefit from more than one dose of painkiller/pep pill at once.

Medical Services

The worlds of the inner ConFed will provide free medical care to their citizens. On capitalist worlds, such services must be paid for in hard cash.

Service	Time Taken	Cost	Treatment
Visit to doctor	1/2-2 hours	20-50	Minor illnesses, grazes
Visit to hospital	2-6 hours	100-200	Sets bones, dresses light wounds, etc.
Hospitalization	per day	500-800	Concussion, serious wounds, stable characters with major/catastrophic wounds, etc.
Intensive care	per day	1000-2000	Unstable major and all catastrophic wounds

TOOLS

The chart on the following page contains all the miscellaneous equipment which the characters might want to use for purposes other than hurting other people. It includes everything from power tools to radios.

Notes for Tool Chart:

1. 20 minute oxygen supply
2. 3 hour oxygen supply.
3. Generators would usually be state supplied.
4. Use not recommended without a gas mask. After 10 minutes' wear, NBC (nuclear/biological/chemical) suits heat up, causing 1 point of fatigue per turn until the suit is opened.
5. Pocket pagers are uvery small units used instead of hand computers to receive notice of urgent messages and have no other functions.
6. Range = 1km
7. Range 2-300km (ground to low orbit). The main difference between civil and military communicators is that military radios send their messages in condensed pulses to reduce the chance of the transmitter being pinpointed by detection gear.
8. Range = 5km
9. Range = 500m
10. Integral space invader game optional.

WAGES

Given the array of potential expenses detailed above, players can at least be comforted by the thought that money can be earned to cater to the characters' expensive tastes. Please note that many wages will be paid bi-weekly or even monthly.

Sample Incomes
Inner ConFed worlds

Income Source	Weekly Income
Standard state allowance	80
Casual labor	+50
Part time labor	+80-100
Full-time work (service)	+160-200
Full-time work (admin)	+160-200
Senior admin	+300-1000

The worlds of the inner ConFed provide for most of their citizens' needs, and thus work for a set wage is performed only to increase a citizen's purchasing power, and not as a vital necessity. Citizens who join the armed forces will be paid at the level of service or administrative personnel, depending on rank.

Capitalist worlds

Type of Job	Weekly Wages ("take home" pay)
Unskilled labor	160-250
Skilled labor	260-320
Highly paid labor	350-450
Lower level executive	500-1000

The outer ConFed and the ILR worlds more closely approximate modern western capitalism in their economic set-ups. Characters will have to earn a wage to provide themselves with food, lodgings, medical care and information access.

TOOL	COST	WEIGHT	NOTES
Axe	50-75	2.5	
Bicycle	100-200	6	
Binoculars	200-300	1	
Breathing apparatus, light	200-250	3	1
Breathing apparatus, SCUBA	500-700	12	2
Calculator	10-50	neg	
Camera, good quality	400-500	1	
Camera, instamatic	50-100	.5	
Camera, micro	400	neg	
Electronics tool kit	100-200	5	
Emergency car tools	30-50	3	
Explosives, industrial	100	1	
Explosives, plastique	1000	1	
Fire extinguisher	150	5	
Flare pistol	300 + 5/shot	.5	
Gas mask	50-75	.5	
Generator, "portable", fusion	5000-8000	4 tons	3
Hand tool	8-12	.1	
Inertial locator	200-300	neg	
Lamp, infrared	100-200	.5 to 1	
Lantern	25-50	1	
Laser, theodolite	1000	3	
Lighter	1	neg	
Mechanical tool kit	300-500	10	
Megaphone	80-140	3	
Monitor (computer display)	200-500	6	
Nuclear/biological/chemical (NBC) suit	500	8	4
Oxy-aceteline torch + gas	300	12	
Pager, pocket	50	neg	5
Periscope, binocular	250-350	1	
Power collector, solar	1000-1200	30	
Power tool	80-350		
Radiation counter	100	1	
Radio, handset	100	.25	6
Radio, long range, civil	300-500	4	7
Radio, long range, military	400	2	7
Radio, short range, civil	100-300	1	8
Radio, short range, military	100	1	8
Radio headset, small	50	neg	9
Rope, 300kg test, 100m	50	3	
Tarpaulin, full	50-60	3	
Tarpaulin, shelter half	10-20	.5	
Torch	5-25	.5 to 2	
Watch	10-200	neg	10
Video camera + laser disk memory	300-800	.8 to1.2	

ARMOR

Body armor is common issue to combat troops, police and air crew. Military body armors are not available to the public, but a number of items of protective clothing are produced for the consumer public.

All body armors are flexible, since rigid body armor has proved to be prohibitively cumbersome, and is completely unsuited for wear by combat personnel. Flexible body armor has a worn life of about five years, after which it must be discarded due to the deterioration of the armor material (-1DRM to penetrate with any firearm).

PROTECTIVE CLOTHING

Heavy Jacket
Penetration Resistance: 1 (vs melee weapons only)
Impact Distribution: 1
Weight: .75
Encumbrance: 0
Cost: 200-300
Coverage: Chest, abdomen, arms
Description: A frequent item of wear among persons who require a degree of protection against the weather, cold temperatures or cuts and abrasions (e.g., pilots and motorcycle riders). Heavy jackets are a common item of wear among military personnel, but are not a usual item of civilian attire.

One possible variant of the normal heavy jacket is a bullet proof version fashioned from ballistic fabrics. Such items have a weight of 1kg, Penetration Resistance 2, Impact Distribution 1, and Encumbrance 1. Protective jackets of this kind cost 300-400 credits.

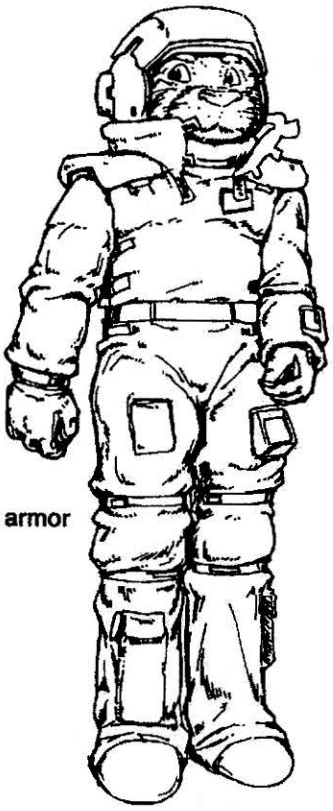
Helmet Liner
Penetration Resistance: 0
Impact Distribution: 1 (skull only)
Weight: neg
Encumbrance: 0
Cost: 50
Coverage: Head
Description: A padded cap which is designed to fit underneath crash or battle helmets, providing a secure means of affixing earphones and microphones for communications equipment. Helmet liners are made from a tough, shock absorbent material, with long, earphone-equipped padded pouches covering the wearer's ears. Helmet liners are exclusively used by officers, pilots and armored vehicle crews, whose battle or crash helmets are specially constructed to allow for the added bulk of the liner. Many vehicle drivers will forgo the use of a crash helmet entirely in favor of wearing the liner by itself, which is more than sufficient protection against minor accidents. Reduce the Initiative of the wearers of helmet liners by 2 when they are in a situation where hearing might count (i.e., at close ranges away from the noise of vehicle engines). Add the Impact Distribution of a helmet liner to that of any helmet with which it is worn.

BODY ARMOR

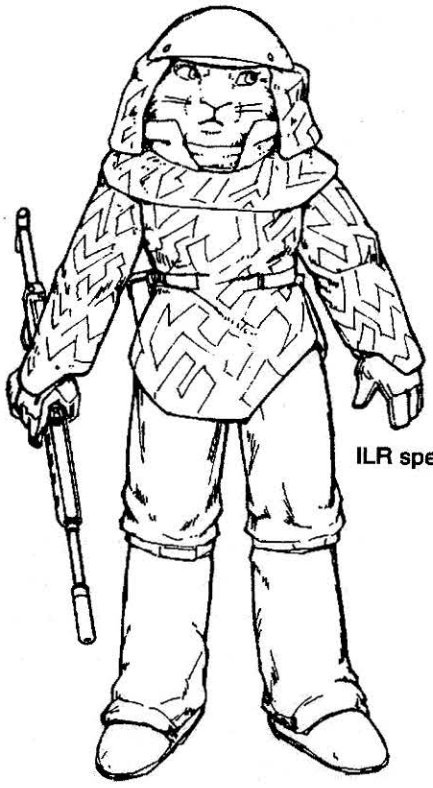
Ballistic Vest
Penetration Resistance: 2
Impact Distribution: 2
Weight: 2 (Light/Average/Solid frames)
1.5 (Small frame)
2.25 (Huge frame)
Encumbrance: 0
Cost: 150-300
Coverage: Chest, abdomen
Description: A thinner version of flak armor, ballistic vests are designed to offer protection against fragments and low velocity splinter wounds, but are not intended as bullet proof protection. Ballistic vests have, however, proven capable of resisting low energy cross section ammunition (regular "ball" pistol ammunition) and ILR 6mm pistol rounds. Vests lack the impact absorbing plates and padding of full flak armor.

Ballistic vests will often be found being worn by logistics vehicle crews, pilots of non-combat military aircraft, and the like. Many police and security personnel might also wear light ballistic armor rather than the more cumbersome military suits.

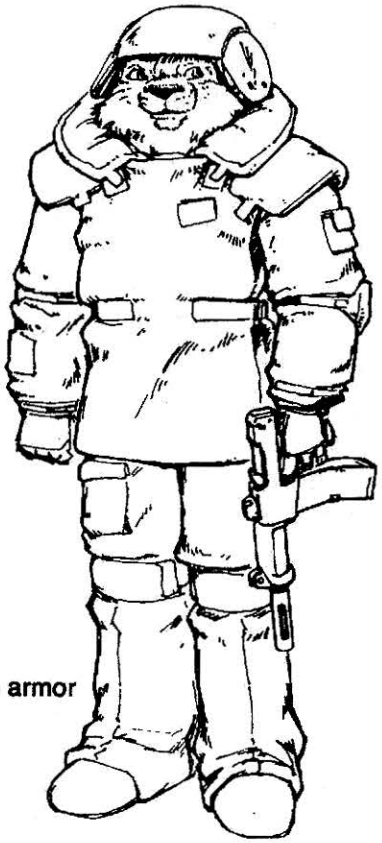
Flak Armor
Penetration Resistance: 3
Impact Distribution: 3
Weight: 3.5 (Light/Average/Solid frames)
3 (Small frame)
4.25 (Huge frame)
Encumbrance: 1
Cost: 300-400
Coverage: Chest, abdomen, neck
Description: The most common form of body armor among ConFed EDF troops, flak armor is an armored body jacket formed from monomolecular laminate tiles sandwiched between layers of exotic ballistic fabrics. Flak armor is not made to cover the wearer's limbs, as this would be prohibitively cumbersome. Flak armor is the standard armor of high tech combat



EDF aircrew light armor



ILR special assault armor



EDF full battle armor

ILR skirmishing battle dress

infantry units, combat aircrew and combat ground vehicle crew.

NOTE: The extensive collar of standard EDF flak armor is typically worn open at the throat, and will not normally protect the wearer's neck from the front. If the suit's neck protection is fastened up, raise the Encumbrance to 2.

ILR Ballistic Armor
Penetration Resistance: 2
Impact Distribution: 3
Weight: 2
Encumbrance: 1
Cost: 300-400
Coverage: Chest, abdomen, arms, legs, neck
Description: Unlike the ConFed, the Independent Lapine Republic prefers to give its troops a small measure of armored protection over the largest possible area of the body. Republican combat troops will normally wear a set of overalls fashioned from padded ballistic material. Plate inserts may be added to cover the frontal chest and abdomen, raising the armored protection in these areas to 3 Penetration Resistance and 3 Impact Distribution, at a cost of raising the suit's Encumbrance to 2 and its weight to 4kg. Like EDF flak armor, an ILR ballistic armor's neck does not normally protect the wearer in the front.

Crash Helmet
Penetration Resistance: 2 (skull), 1 (upper/lower face)
Impact Distribution: 2
Weight: .5
Encumbrance: 0
Cost: 150-200
Coverage: Head
Description: A helmet fashioned from a tough, shock resistant plastic laminate. Military crash helmets are usually fashioned to fit over a helmet liner. Helmets designed for use by pilots, NBC security crews and the like may be fully sealed units with a built-in filtering apparatus or oxygen feed (see the hostile environment equipment section below).

Battle Helmet
Penetration Resistance: 3
Impact Distribution: 2
Weight: .75
Encumbrance: 0
Cost: 100
Coverage: Skull. The helmet will protect the wearer's upper/lower face from the sides and rear.
Description: A light monomolecular laminate helmet. Most military helmets are open faced, but can be fitted with a visor which offers some small arms/splinter protection to the upper face from the front (Pen Res 2, Impact Dist 3), at a cost of reducing the wearer's Intuition by 1. Most battle helmets come equipped with an integral short range communicator.

HOSTILE ENVIRONMENT EQUIPMENT

Vacc Suit Helmet
Penetration Resistance
Helmet = 3 (Skull)
Visor unit = 1 (upper face), 2 (lower face)
Impact Distribution: 3
Weight: 1.2 (.9 kilos with visor unit removed but comm gear retained)
Cost: 300 + cost of comm package
Coverage: Head. Visor unit covers face.
Encumbrance: 1 while visor is attached
Description: The vacc suit helmet is a sturdy and flexible piece of equipment. Available with armored protection equal to crash helmet (civilian models) or battle helmet (military versions) standards, the basic vacc suit helmet is a three piece unit consisting of a hemispherical open-faced helmet to which a seperate visor/faceplate unit may be attached, allowing the helmet to be fully sealed when linked to a vacc suit liner. An integral visor guard may be slipped down to cover the faceplate in case of flashes or abrasive particles (Pen Res of 4, but

the wearer's Intuition score and Spot Hidden skills are penalized by a DRM of 2).

Vacc suit helmets are always worn with a helmet liner, which keeps the wearer's earphones and hair in place.

At the back of the helmet's skull is an exterior communications/life support unit. These come in a number of configurations, a few of which are listed below:

• S.R. radio: A short range communicator as specified under the tool list on page 74. (100 credits)

• L.R. radio: A multi-channeled air/ground military communicator. L.R. comm packs are common wear for combat aerodyne crew and infantry officers, who often have need of air liaison equipment. (400 credits)

• Life support monitor: The standard packet for vacuum wear. A life support monitor provides the helmet with short range radio and laser communications equipment, and it will monitor a vacc suit's internal/external environment and keep the wearer informed (via a head display) of any losses of pressure, undesirable gasses, or similar mishaps. (500 credits)

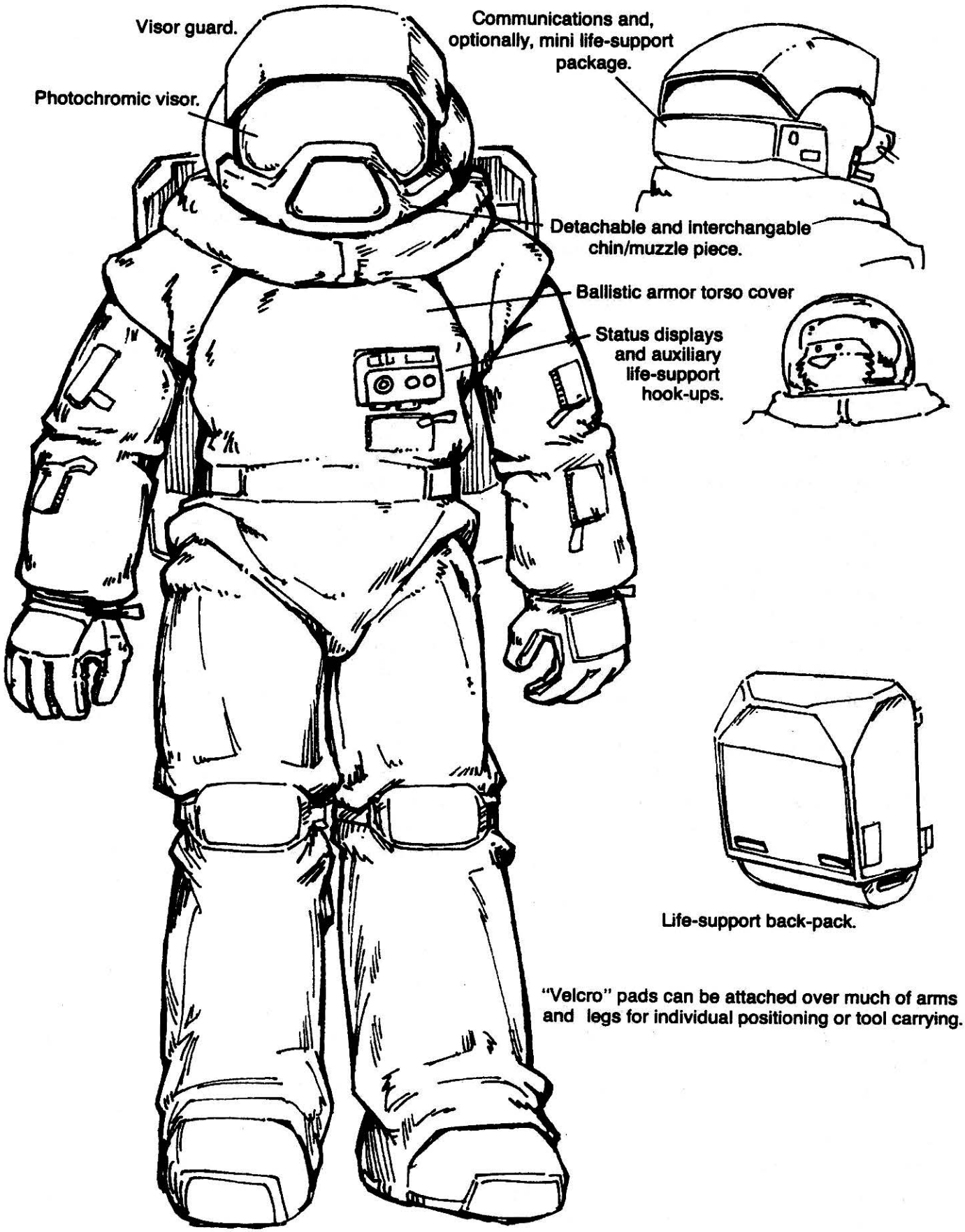
When the visor unit and life support monitor are removed, the wearer is left with a practical and sturdy helmet with integral radio equipment and flash visor.

Vacc Suit Liner
Cost: 300
Weight: neg
Encumbrance: 0
Description: A tight, flexible body sheath designed to afford the wearer a measure of protection from a vacuum. When accompanied with a vacc suit helmet, gloves and boots, vacc suit liners will protect the wearer from vacuum exposure for a limited amount of time. After 30 minutes of exposure, characters will start to suffer discomfort from their unsupported internal organs, which causes all Fatigue losses from movement to be doubled.

Torso Supporter
Penetration Resistance: 0
Impact Distribution: 0
Cost: 300
Weight: .25
Encumbrance: 1
Description: Designed to complement a vacc suit liner, semi-rigid torso units will provide the wearer with the support for the abdomen and lungs lacking in a vacc suit liner. This extends the time that a vacc suit liner may be worn without adverse Fatigue effects to about 60 minutes.

Vacc Suit
Penetration Resistance: 2
Impact Distribution: 1
Cost: 8000
Weight: 5 (Light/Average/Solid frames)
4 (Small frame)
6 (Huge frame)
Encumbrance: 1
Description: The standard vacc suit is a tough, double skinned garment which sandwiches a layer of puncture sealant between its inner and outer skins. This sealant will plug most minor punctures and tears, but heftier breaches must be sealed with emergency suit patches, one or two of which are stored in the emergency equipment pockets of every suit. The joints of the suit are accordioned to minimize the encumbrance of the suit, but the garment still manages to be fairly stiff and heavy.

The standard vacc suit has a number of velcro patches on the soles/toes of the feet, knees, elbows, thighs, shins and gloves to facilitate movement or to attach items of personal equipment. Magnetic boot soles and palm liners may be activated at the whim of the wearer if so desired. Other suit fittings include lights and jacks (plugs) allowing the wearer to hook into intercom or computer systems. The pockets of most suits will contain emergency suit patches and a length of tether line.


Visor guard.
Photochromic visor.
Communications and, optionally, mini life-support package.
Detachable and interchangable chin/muzzle piece.
Ballistic armor torso cover
Status displays and auxiliary life-support hook-ups.
Life-support back-pack.
"Velcro" pads can be attached over much of arms and legs for individual positioning or tool carrying.

Military vacc suits have the torso fitted with flak armor, which gives the suit the same coverage and protective value as a flak jacket in the chest, abdomen and neck (the neck is not protected from the front). The addition of armor to a vacc suit raises the suit's weight by the weight of a set of flak armor, and increases the suit's Encumbrance to 2.

Hostile Environment Suit
Penetration Resistance: 2
Impact Distribution: 3
Cost: 20,000
Weight: 9 (Light/Average/Solid frames)
7 (Small frame)
11 (Huge frame)
Encumbrance: 2
Description: Hostile environment suits are bulky, rigid armored vacc suits designed for wear during repairs on "hot" areas of starship drive units, or in areas prone to high concentrations of floating junk. Their ability to handle punctures through their integral sealant material is very high, as is their resistance to accumulating punctures in the first place.

Life Support Pack
Cost: 5000
Weight: 5
Encumbrance: 0 unless in close quarters, in which case Encumbrance = 1
Description: The standard life support pack, designed for use with vacc suits which are independent of "umbilicals", is a lozenge-shaped backpack which slots directly onto the rear of the suit. The normal issue life support pack contains air scrubbers and tanked oxygen capable of sustaining the wearer for about four hours, and includes gas jets for personal maneuver. In emergencies, the oxygen supply can be used as additional maneuver fuel.

A variant on the basic form has half the normal oxygen supply, but three times the maneuvering capacity of the standard pack. The life support packs of some vacuum work crews will have additional features allowing a monitoring computer to control the unit if the wearer should become incapacitated. This feature costs an additional 500 credits, and its use requires the wearer to be in communications contact with a monitoring computer (either by radio or cable link).

Rescue Ball
Cost: 250
Weight: 3
Description: Rescue balls are clear plastic envelopes with a three-hour oxygen supply. They are designed as emergency equipment for vacuum installations and large vessels. Getting into a rescue ball in only one turn requires a Coord check versus 10.

PUNCTURES TO SELF-SEALING SUITS

The chart below shows the score required on 1d6 for a vacc suit to successfully seal a puncture using only its internal sealants. Any breach may be sealed with an emergency patch, requiring a roll of the character's MDex versus 10 to do so. Each attempt to patch a suit takes one full turn.

Vacc Suit Punctures

Type of Suit Breach	Vacc Suit	Hostile Env. Suit
Minor puncture	1-6	1-6
Puncture	1-4	1-5
Tear	1-3	1-4
Major tear	no	1

Hits to a vacc suit helmet will not self-seal. If a character's helmet is penetrated, then the suit will explosively decompress.

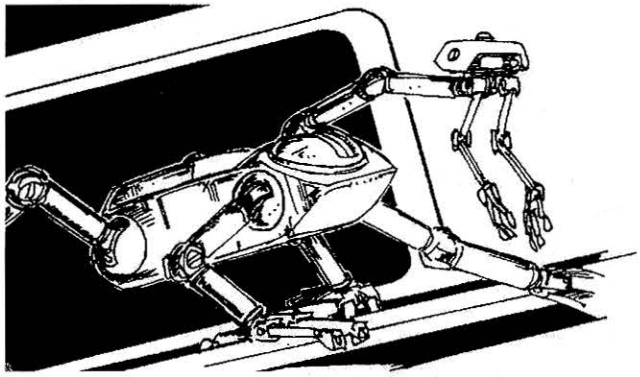
ROBOTS

Several types of robot are currently available on the commercial market in Albedo, most of which take full advantage of the high state of AI technology. Robots are commonly used to perform a variety of tedious or dangerous tasks, providing the bulk of the manual labor required for the maintenance of technical society. Robots see no use as combative "soldiers" due to the abhorrence with which this concept is viewed (the computers are not too keen on the idea either!).

Robots are created in specialized, practical shapes, and are in no way anthropomorphic. Robots race about the place on tracks, legs or wheels, and have senses and manipulative devices designed purely for their intended job.

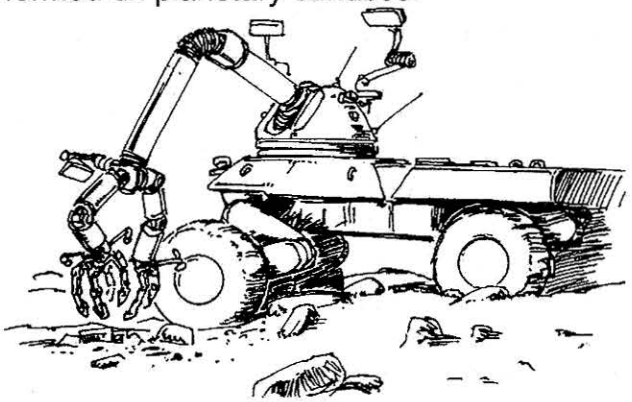
Most robots will cost at least 10,000 credits. This will cover a simple model designed to move about and carry items. Robots with more extensive memories, manipulative equipment and special fittings will cost considerably more. Some possible types of robot might include fire fighting 'bots, valets, cargo loaders, librarians, and repairmen. The expensive robots necessary for the crewing of installations and starships will usually be supplied by or leased from the state.

EXAMPLE: Probot
Cost: 75,000
Weight: 130
Description: A flexible, intelligent machine designed to provide a wide array of sensitive detection gear for search/exploration tasks. The robot has gas jets for zero-G maneuver, four legs equipped with grippers, a flexible neck equipped with sensory arrays and two small manipulative arms. The device's sensors include the following: UV/visible/IR optics, sonar/seismar, limited mass detection, charged/uncharged partical sensors, pan spectrum electromagnetic (EM) monitors, and audio pickups.



Probots are useful items for exploring the extent of battle damage on starships, search and rescue missions, and scouting.

EXAMPLE: Engineering Robot
Cost: 50,000
Weight: 150
Description: The hands and eyes of a starship AI net, engineering robots are used to effect repairs and perform construction tasks in zero-G or hostile environments. Engineering robots are equipped with legs, gas jets, a number of light and heavy manipulative arms, tools, and have sensory gear attuned to their task of close-in work. Most starships will have a gaggle of engineering 'bots on board for use in emergencies, and for performing routine maintenance. Simpler versions of this device will be used for construction work and repairs performed on planetary surfaces.



SENSORS

Current sensor systems include ultraviolet and infrared optics, sonar/seismar, mass detection, charged/uncharged partical sensors and pan spectrum EM monitoring. A few of the systems that players will find most useful are listed below. Other items such as miniature directional micophones, etc. are available, but are special tools (and therefore custom made to order).

Electromagnetic (EM) Detectors
Cost: 8,000+
Weight: 10+
Description: Usually part of a starship or vehicle sensor system, EM detectors register the EM transmissions from powered equipment and transmitters. The ranges of EM detectors will vary depending on the size of the detection gear (the equipment in aerodynes will have a range of a kilometer or two, whereas the equipment in starships operates across immense distances). Long range equipment will usually lack the pinpoint accuracy of the smaller detectors.

Movement Sensor
Cost: 200
Weight: Neg
Description: Small, short-range devices designed to be installed in a static position. Movement sensors are set to give off an alarm when movement is detected in a set 60° arc.

Charged-Couple Detector (CCD) Eyepiece
Cost: 200
Weight: Neg
Description: A solid state night sight in the form of a lens cap which is designed to clip onto a set of binoculars or a firearm sight. As CCD eyepieces react to low frequency as well as low light, some thermal imaging is also possible, and infrared-specific CCD eyepieces are available. IR CCD equipment can "see" target heat even through "soft" cover, and threby defeats an opponent's partial concealment. Standard CCD eyepieces have a more limited thermal imaging performance. Characters making spotting attempts at night with CCD equipment are not penalized for poor light conditions.

Thermal Sight
Cost: 800
Weight: .5
Description: A specialized thermal imaging telescope which can be hand-held or weapon-mounted. Thermal sights are capable of showing the heat of targets sheltering behind cover. "Soft" cover (partial concealment) does not count against weapons equipped with thermal sights. Other effects on spotting attempts are similar to the CCD eyepiece listed above.

Night Goggles
Cost: 400
Weight: Neg
Description: CCD goggles/visors used to provide troops with proper night vision. Night goggles are often attached to battle helmets as a visor (with protective values as described under battle helmets on page 78). CCD equipment will blank itself out rather than allow the passage of light levels high enough to damage the wearer's sight.

Pocket EM Detector
Cost: 40
Weight: Neg
Description: Portable warning beeper used to warn of radar sweeps or unaccountable transmissions in the user's immediate area.

VEHICLES

A huge array of vehicles are available to the societies of Albedo. Unfortunately, a complete discussion of vehicles and vehicle combat will have to wait for a future volume. For the present, we will only detail the vehicles which characters will be most likely to use or encounter.

Small ground vehicles will usually be powered by hydrogen combustion engines. The larger ground vehicles in Albedo are powered by electric motors set into each wheel hub, which draw their power from gas turbine generators (high tech vehicles often have heat/energy converters added to the vehicle to scavenge extra power and to disperse waste heat). Ground vehicle engines are comparatively quiet.

The materials technology of Albedo has produced monomolecular armor, a composite material constructed from monomolecular laminates of dissimilar metallic and non-metallic materials. The resulting armor is extremely strong; most vehicles clad in monomolecular armor are essentially protected against all but vehicle-mounted heavy weapons. Their hulls are protected against mines and high explosive warheads. Only hyperkinetic guns and directional explosive warheads stand a real chance of destroying an armored vehicle, although close range, concentrated cannon fire can occasionally chew its way through laminate armor by repeated hits on the same area. Military vehicles thus polarize themselves into anti- vehicle and infantry support roles. Armored vehicles are surprisingly small due to the compactness of their engines, weapons systems and armor, greatly facilitating their air portability. Most EDF vehicles are tracked, while the ILR uses mostly wheeled vehicles. Homeguard forces might have just about any type of vehicle, but most planetary defense forces will have spare part compatibility with the standard equipment of their allies.

ARMOR

Vehicle armor is divided into light and heavy composite armor. Vehicle armors in Albedo are formed from monomolecular laminate, and are extremely strong. A vehicle must be either tracked or have eight wheels to carry heavy composite armor. The Penetration Resistance and Impact Distribution for both armor types are listed below: Roof armor is the same thickness as the vehicle's sides and rear.

Vehicle Armor

Armor Type	Pen Res
Light composite	10 (front)
	8 (sides & rear)
	6 (suspension)
Heavy composite	14 (front)
	12 (sides & rear)
	10 (suspension)

CIVILIAN VEHICLES

A variety of civilian ground cars and light trucks are available to the public. The level of private car ownership on the worlds of the inner ConFed is quite low. Wheeled chassis form the basis of most civilian and many military vehicles. They are popular due to their cheapness and durability.

Cycle

Chassis type:	Wheeled
Structure:	+2
Max load:	Driver + 1 passenger
Cruise speed:	80
Top speed:	120
Turn speed:	50
Max accel:	40
Max decel:	60
Cost:	3,000-5,000

Ground Car

Chassis type:	Wheeled
Structure:	+4
Max load:	Driver + 4 passengers
Cruise speed:	60
Top speed:	110
Turn speed:	40
Max accel:	30
Max decel:	60
Cost:	8,000-10,000

Van

Chassis type:	Wheeled
Structure:	+5
Max load:	Driver + 8 passengers
Cruise speed:	60
Top speed:	100
Turn speed:	40
Max accel:	30
Max decel:	60
Cost:	10,000-15,000

Truck

Chassis type:	Wheeled
Structure:	+7
Max load:	Driver + 12 passengers
Cruise speed:	50
Top speed:	90
Turn speed:	20
Max accel:	15
Max decel:	50
Cost:	20,000-30,000

Heavy Truck

Chassis type:	Wheeled
Structure:	+8
Max load:	Driver + 24 passengers
Cruise speed:	50
Top speed:	90
Turn speed:	20
Max accel:	10
Max decel:	40
Cost:	40,000-80,000

MILITARY VEHICLES

Military vehicles have wheeled, hover, or tracked chassis. Air cushion hover vehicles, also termed GEV's (ground effect vehicles), are rarely used by the military since they are immensely handicapped by rough terrain, maneuver poorly through tight streets, and produce a large amount of noise and dust.

Due to their low ground pressure and high traction, tracked vehicles are popular in a cross country role. Most EDF armored vehicles are tracked (although they can operate on their road wheels if necessary). A major disadvantage with tracked vehicles is that they may shed a track upon performing a violent maneuver. When turning more than 60° while traveling at more than 1/2 the vehicle's turn speed, roll the driver's skill vs 10 to avoid shedding a track. Vehicles which shed a track halve their maximum turn speed, and drop their maximum speed to 3/4 of the rated amount until the remaining track can be blown, after which the vehicle is treated as a wheeled vehicle.

The standard tracked vehicle is quite small to allow for air portability. Heavier vehicles are occasionally used by some Homeguard units.

4-Wheeled

Chassis type:	Wheeled
Structure:	+5
Max load:	Driver + 1 passenger
Cruise speed:	60
Top speed:	100
Turn speed:	40
Max accel:	25
Max decel:	60

6-Wheeled

Chassis type:	Wheeled
Structure:	+6
Max load:	Driver + 4 passengers

(long body vehicles may carry 6 passengers)

Cruise speed:	60
Top speed:	100
Turn speed:	30
Max accel:	20
Max decel:	60

8-Wheeled

Chassis type:	Wheeled
Structure:	+8
Max load:	Driver + 9 passengers
Cruise speed:	60
Top speed:	80
Turn speed:	20
Max accel:	15
Max decel:	60

Hover Car

Chassis type:	Hover
Structure:	+4
Max load:	Driver + 3 passengers
Cruise speed:	80
Top speed:	160
Turn speed:	20
Max accel:	30
Max decel:	30
Cost:	20,000-30,000

Light GEV

Chassis type:	Hover
Structure:	+6
Max load:	Driver + 6 passengers
Cruise speed:	80
Top speed:	160
Turn speed:	10
Max accel:	30
Max decel:	30
Cost:	25,000-35,000

Heavy GEV

Chassis Type:	Hover
Structure:	+8
Max load:	Driver + 48 passengers
Cruise Speed:	60
Top Speed:	140
Turn speed:	10
Max Accel:	20
Max Decel:	20
Cost:	50,000-100,000

Tracked Vehicle

Chassis type:	Tracked
Structure:	+9
Max load:	Driver + 8 passengers
Cruise speed:	30
Top speed:	80
Turn speed:	30
Max accel:	20
Max decel:	60

GROUND VEHICLE TURRETS

Turrets come in two basic formats–"normal" and "low profile." Low profile remote turrets (consisting of a remotely controlled weapon on a swivelling mount equipped with fiber-optic remote sights) have a far smaller silhouette than normal turrets. Normal turrets (not low profile systems) contain a "fighting compartment" in which the gunner/commander will be relocated from the crew compartment. Thus the gunner in a turreted vehicle will not occupy any space normally reserved for passengers.

Turrets for vehicles with a structure of 8- may mount a maximum of one light weapon system and a coaxial weapon. Turrets for vehicles with a structure of 9 or 10 may mount a maximum of one light weapon system or a light hyperkinetic gun or gun/mortar coupled with a coaxial armament; or two light weapon systems. Vehicles with a structure rating of 11+ may mount turrets fitted with one light weapon system or a hyperkinetic gun or gun/mortar (light or heavy) coupled with a coaxial armament; or two light weapon systems.

Turreted armaments may swivel through 360° on the horizontal plane. Low profile turrets may depress 20° from true, and elevate up

to 90°. Full turrets rarely manage this degree of suppleness. Turreted weapons cover a 60° arc, and may traverse through 60° (one hex face) per turn phase (i.e., turn through five hex faces per game turn). While turrets traverse before determining the vehicle's firing for a given game phase, an adverse accuracy DRM is applied to any shots fired in a phase in which the turret traverses.

WEAPONS

A weapon comes complete with a basic ammunition load. Extra loads of ammunition may be taken at the cost of the space normally occupied by one passenger.

Coaxial Systems

Coaxial weapons systems are mounted alongside the main weapon in a vehicle turret. A turret gunner may elect to fire either the turret's main gun or a coaxial system in any given phase.

Machine gun

Penetration: By caliber type
Damage: By caliber type
Handiness: Handy
Basic ammo: 1000 rounds
Description: 6mm to 8mm sustained fire machine guns are a common secondary armament for many vehicles. They are detailed more fully in the Weapons section of the personal equipment rules (see page 99).

Heavy machine gun

Penetration: By caliber type
Damage: By caliber type
Handiness: Handy
Basic ammo: 500 rounds
Description: 10mm HMG's are tried and proven anti-personnel weapons, and are thus popular coaxial armorments.

Light Weapon Systems

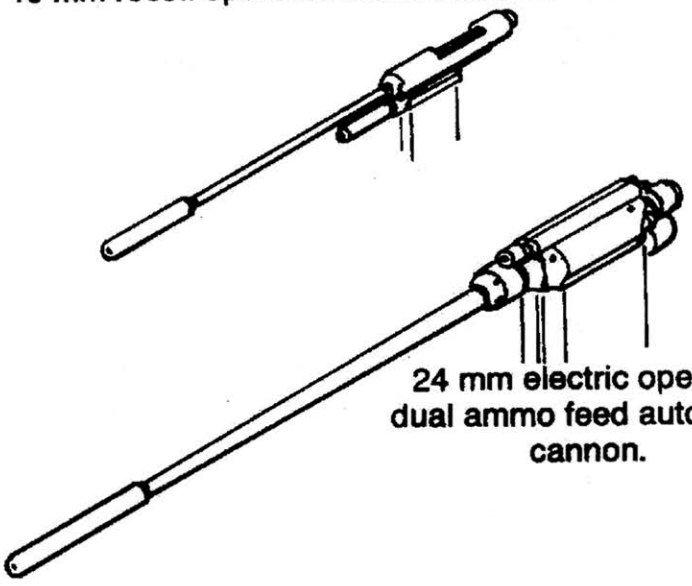
These are largely specialized infantry support weapons.

Light cannon

Penetration: 7
Damage: +6
Handiness: Handy
Basic ammo: 200 rounds
Description: 24mm cannon firing discarding sabot depleted uranium rounds (APDSDU). These weapons are power driven with rates of fire well in excess of 1000 RPM, and thus recieve one additional hit on a target for every point by which they undercut the normal required roll to hit. Against vehicle targets, only one actual "hit" will result from any single hit roll. For each additional shell impacting on the target, add +1 to the weapon's effective penetration and damage (representing the effect of several impacts on the same area).

Light cannon consume 20 rounds of ammunition whenever they fire a wild burst.

10 mm recoil operated turret mounted machine gun.



24 mm electric operated dual ammo feed automatic cannon.

32mm or 48mm Auto grenade launcher
Penetration: 6 (32mm) or 7 (48mm)
Damage: 7 (32mm) or 8 (48mm)
Handiness: Cumbersome
Basic ammo: 48 (32mm) or 32 (48mm) rounds
Description: These devices are capable of providing a vehicle with adaquate light anti-armor ability, and prove useful in the anti-personnel role. GL's may fire a variety of grenade rounds, including AP, frag and smoke. Grenade launchers on EDF vehicles will fire 32mm variable grenades. 48mm automatic grenade launchers currently see use with the ILR and a few Homeguard forces.

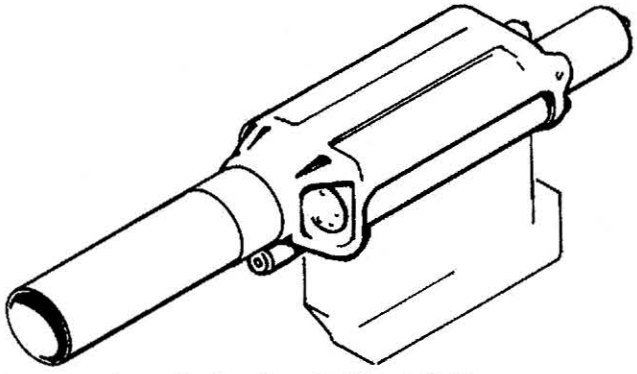
Heavy Weapon Systems

Heavy vehicle weapons are specialized anti-vehicle/anti-strong point devices. Hyperkinetic guns lack the ability to project high explosive/fragmentation shells, and must rely upon the effects of their kinetic ammunition. Guns/mortars lack any anti-armor capacity, although specialized demolitions ammunition might see some use against strong points. The shells fired by hyperkinetic guns and by guns/mortars are not fixed case ammunition (that is to say, the weapon's rounds do not come as a cartridge containing both the projectile and the propellant). They are powered by the explosion of a two part liquid propellant injected into the weapon's ignition chamber a moment before firing. "Binary propellants" are considerably more compact than cartridged propellants, an important consideration in the small, air portable vehicles used by the EDF and the Republic.

In the anti-personnel role, hyperkinetic guns do not fire at individual people, but rather at areas, causing all characters present in a twenty meter radius of the strike zone to suffer a blast damage of +4 and 1d6 fragmentation hits (roll these as missile fragments).

Light hyperkinetic gun
Penetration: 12
Damage: +8
Handiness: Cumbersome
Basic ammo: 4 shells
Description: 64mm guns firing hypervelocity depleted uranium munitions. They are common armaments for fire support vehicles and heavy scout vehicles. Hyperkinetic guns are self-loading weapons.

Heavy hyperkinetic gun
Penetration: 14
Damage: +9
Handiness: Very cumbersome
Basic ammo: 3 shells
Description: 80mm semiautomatic hypervelocity guns firing fin-stabilized depleted uranium munitions (APDU). They are mostly found as primary guns on heavy combat vehicles, although some light vehicles may also tote such iron-mongery into battle.



280 mm automatic-feed rocket launcher.

Light gun/mortar
Penetration: N/A
Damage: N/A
Handiness: Cumbersome
Basic ammo: 2 shells
Description: 120mm short tube launchers designed to lob high explosive. The blast from a mortar bomb has a damage of +8, and has a twenty meter blast radius. Mortars are fairly rare weapons.

Heavy gun/mortar
Penetration: N/A
Damage: N/A
Handiness: Very cumbersome
Basic ammo: 1 shell
Cost: 60,000/200 (weapon/ammo)
Description: 240mm versions of the above. Heavy gun/mortar bombs have a damage rating of +12 and a blast radius of thirty meters.

External Systems

Some vehicles may add supplementary weapons (light or heavy machine guns) to the top of a vehicle's turret or deck (providing it is positioned so as not to be swept off by the turret gun as it traverses). Such systems are usually fixed on a swiveling pintel mount (and are therefore fired by an exposed crew member), although they can be mounted in a mini-remote turret controlled from within the vehicle via fiber-optic remote sights.

OTHER VEHICLE FEATURES
Sensors
Sturdiness: 7

Military armored vehicles or scout vehicles will usually have a variety of sensor systems installed. Full sensor equipment occupies space equal to one or two passengers, and is thus an uncommon fitting on personnel transports. Standard sensors include EM detectors, ground surveillance radars, thermal imaging equipment, and ground vibration detectors. Most line of sight detection systems can operate through an extendable periscope. Some specialist vehicles will have air tracking radars to allow effective anti-aircraft fire.

Vehicle sensors may be used in active and/or passive modes. Passive sensors can detect EM emanations and active detectors out to about ten kilometers, with an accuracy of 1/100 of the range to the target. Pinpointing military communicators or detectors is difficult, and requires a dice roll of 7- on 2d6. Passive sensors may register vehicle movement and firing in quiet areas, and give an indication of direction and range. Active sensors (radars) will spot moving vehicle sized targets out to the limits of the vehicle's line of sight.

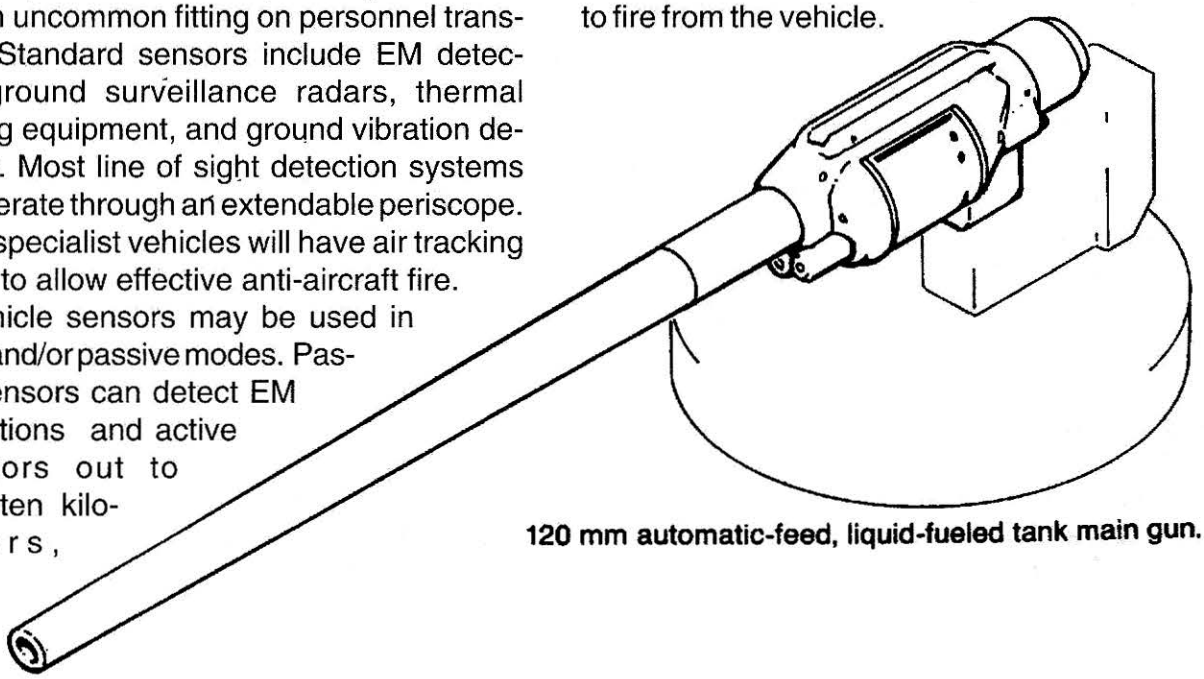
The sensors will usually be run by the vehicle's AI computer, and any relevant information is subsequently passed on to the gunner/commander and his driver.

Smoke dischargers
Sturdiness: 9

A set of one shot smoke grenade mortars which shoot clusters of smoke grenades to the vehicle's turret front. They may be reloaded by an exposed character in six actions.

Firing ports
Sturdiness: N/A

Many vehicles which are designed to carry passengers have provision made for the passengers to fire out of the vehicle without exposing themselves. Firing ports may be put on the sides and rear of any such vehicle, and these will allow small arms to fire from the vehicle.



120 mm automatic-feed, liquid-fueled tank main gun.

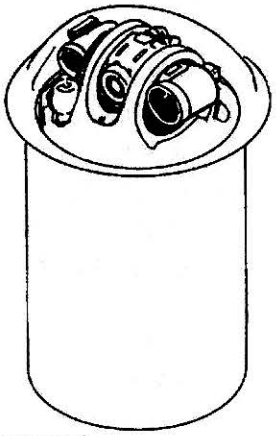
AIR VEHICLES

Air Vehicle Armor

The hull of civilian air vehicles will have an armor rating of 3. Military format aerodynes will have cockpits armored with light composites, and lesser degrees of protection across vulnerable areas of the ship. The armor ratings of the various hit locations are as follows:

	Light aero	Heavy aero
Forward fuselage	8	10
Cockpit	8	10
Power compartment	10	12
Thrust vents	4	5
Fuel tank	7	8
Main fuselage	6	8

Aerodyne weapon systems are usually mounted in paired swivel mounts which allow all weapons to be brought to bear to the front or underneath, one weapon of each pair to be brought to bear to each side, and the rearmost pair of weapons to fire to the vehicle's rear. Any gunner or pilot may roll to hit only once in a turn phase, but identical weapons systems may be linked together, sharing the one roll to hit but making seperate hit location, penetration and damage rolls.



Small aerodyne-mounted laser weapon turret.

Atmosphere Craft

There are a number of atmospheric aircraft in production all across known space, all of which fill the roles of low cost, low speed transport. Atmospheric vehicles operate in the low subsonic speed range. When a higher speed vehicle is required, an aerodyne will be used.

Light fanjet

Cost: 50,000+
Crew: 1 + 1 or 2 passengers
Structure: 5
Maneuverability: 0
Description: Albedo's light pleasure aircraft is a robust little fanjet vehicle somewhat larger in size than a ground car sedan. Capable of carrying two passengers at speeds of up to 250 kph, fanjets are capable of operating with minimal facilities.

Helicopter

Cost: 300,000+
Crew: 1 or 2
Structure: 6
Maneuverability: 1
Description: Rotary wing aircraft are common utility vehicles which are designed for high efficiency at low subsonic speeds, and a good hover performance. Helicopters lack the speed and flexibility of aerodyne vehicles, but are far cheaper. Large cargo-carrying helicopters would have a higher structure rating, and a higher price.

Aerodynes

Aerodynes are highly versatile craft. Normally operating at subsonic speeds, properly adapted aerodynes may travel at high machs if the operator is willing to pay the penalty in increased fuel consumption. Simple preparation and increased fuel stores will allow aerodynes to operate in exoatmospheric or even orbital flight. Most large starships could be expected to carry an aerodyne to serve as a shuttle/ship's boat.

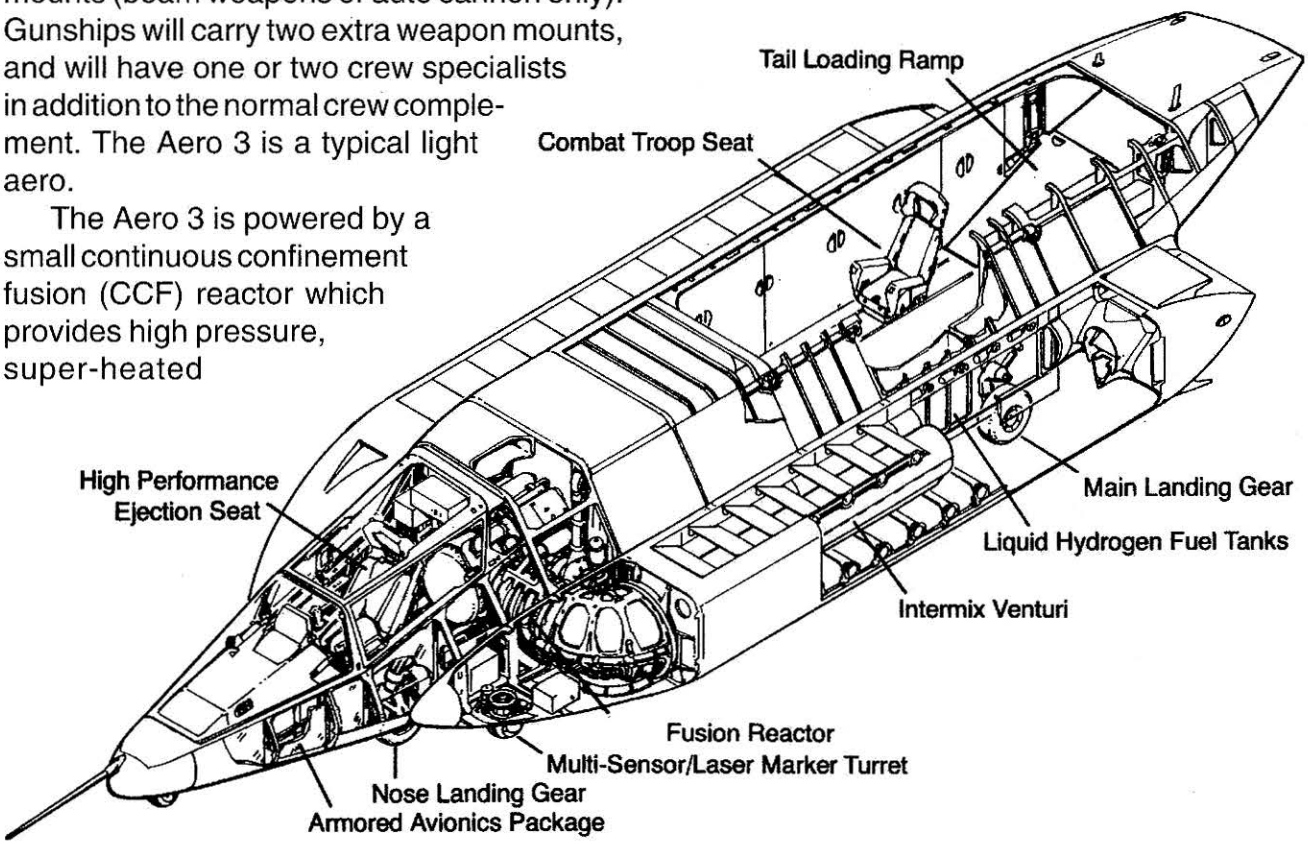
Air car
Cost: c.500,000+
Crew: 1
Structure: 5
Maneuverability: 1
Description: A light four-seater designed for good performance at subsonic speeds. Air cars may not be used for exoatmospheric or orbital flight.

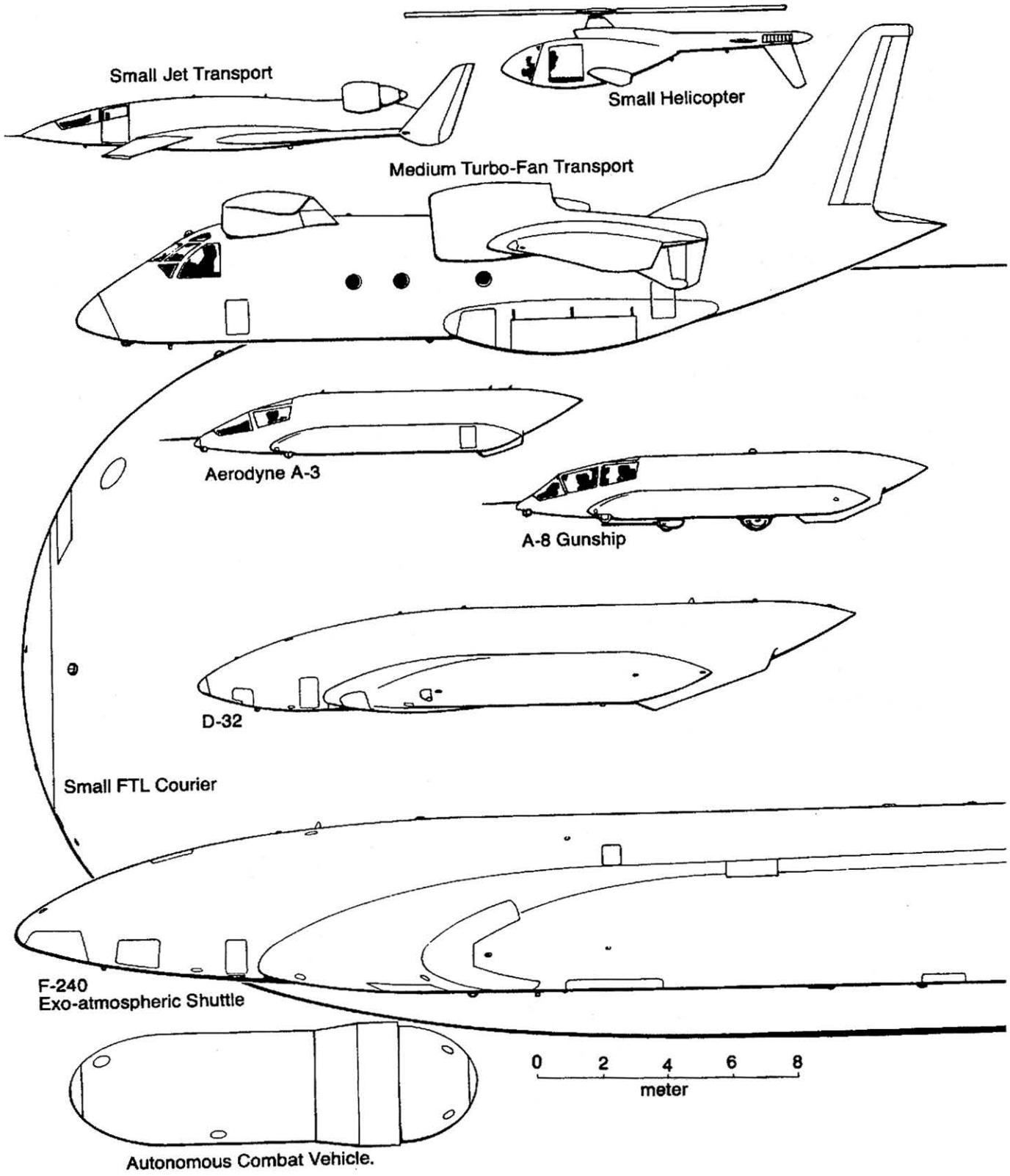
Light aero
Crew: 1 or 2
Structure: 8
Maneuverability: Pilot skill 10-: 1
Pilot skill 11+: 2
Description: Light utility vehicles which see use in a variety of roles. In civilian format, they may carry about eight passengers or 2000 kilos of cargo. Military versions are armored, and may come in transport or gunship modes. Transports will carry about six fully equipped soldiers and have provision for two weapon mounts (beam weapons or auto cannon only). Gunships will carry two extra weapon mounts, and will have one or two crew specialists in addition to the normal crew complement. The Aero 3 is a typical light aero.

The Aero 3 is powered by a small continuous confinement fusion (CCF) reactor which provides high pressure, super-heated hydrogen which is routed through an array of intermix venturii to combine with the atmosphere before being shunted out for vertical or horizontal thrust. Maneuvering for all axes are by differential thrust, managed by on-board computer, which receives its inputs through the pilot's grips and pedals.

The pilot's inputs, however, are for desired attitude rather than direct control, and the computer arranges thrust to suit, keeping track of attitude and environment so as to avoid any "controlled conflicts" with the ground or objects. The computer can also assist in fire control and combat maneuvering, or even take over in case the pilot is disabled.

The Aero 3 has provision for one or two pilots or a pilot and a crew specialist. In cargo configuration, it will carry about 2000kg while maintaining a full fuel load and performance ratings. Though there is surplus power for supersonic flight, the craft's normal operating speed is subsonic, limited by aero heating




Small Jet Transport
Small Helicopter
Medium Turbo-Fan Transport
Aerodyne A-3
A-8 Gunship
D-32
Small FTL Courier
F-240
Exo-atmospheric Shuttle
0 2 4 6 8
meter
Autonomous Combat Vehicle.

restrictions on the airframe. With additional fuel and simple preparation, the Aero 3 can go exoatmospheric or even orbital, providing the flight profile limits heat exposure.

In combat configuration the Aero 3 can carry auto cannon or beam weapons in a variety of ventral turret positions (maximum of two turret mounts). The cockpit and critical avionics are heavily armored, and the fuel tanks are also given added protection. The fuel tanks have an expanded capacity to offset the vehicle's increased weight.

The Aero 3 is now being replaced in front-line units with the Aero 6, but will certainly remain in service with reserve and Homeguard units for a long time to come.

High performance aero
Crew: 1 or 2
Structure: 10
Maneuverability: Pilot skill 10-: 1
Pilot skill 11+: 3
Description: Uprated versions of the light aero, high performance aeros have approximately the same size but offer higher payloads. While space considerations mean that this does not change the number of passengers carried to any real degree, the greater fuel load makes this vehicle faster than the light aero. Military versions carry a higher payload of armor, but otherwise have the same complement of passengers and armament. The Aero 6 is a typical high performance aerodyne.

The Aero 6 can carry a heavier weight of weapons and armor than the Aero 3 without a loss of performance. In gunship configuration, the Aero 6 may be equipped with up to four ventral weapons.

Heavy aero
Crew: 1 or 2
Structure: 12
Maneuverability: Pilot skill 10-: 1
Pilot skill 11+: 2
Description: Heavy transports capable of shifting about 30 tons of cargo, or 40 passengers. Military versions are used as vehicle landing craft and bulk transports, and are accordingly heavily armored. Landing craft will normally have two ventral weapon mounts which may mount beam weapons or cannon. In gunship mode, these vehicles will add two more ventral beam weapon/auto cannon mounts, and a central pair of weapon mounts which may be equipped with 60mm hyperkinetic guns. Gunships will carry additional crew specialists in the main hull to man the extra weapons.

Interstellar Capable Craft

Interstellar aerodynes are formed by lining the hull of a huge cargo vessel with jump field generators and installing the capacitors and magneto hydrodynamic (MHD) coils required to power a jump drive. Interstellar capable aerodynes will have multiple reactors and decks oriented for use when the ship is under forward thrust.

Larger interstellar aerodynes can mass up to 8000 tons, where they are superceded by true starships (which mass 10,000 tons or more). Interstellar aerodynes are quite slow when compared to true starships, since fuel limitations dictate lower levels of thrust during the journey out of a system's gravity well.

FTL aerofreighter
Crew: 4+
Structure: 16
Weight: 600 tons
Description: Lumbering, 600 ton jump capable vessels with 100 ton payloads. FTL freighters do not have the endurance for long trips. Freighters have a 6 point armored skin.

FTL scout
Crew: 4+
Structure: 17
Weight: 500 tons

Description: Jump capable vessels armed with two or more beam weapons. Scouts have enough endurance to endure a few months' trip, giving them limited endurance in an environment which requires long periods of acceleration out of system before a jump can be made.

BEAM WEAPONS
Light beam weapon
Penetration: 3
Damage: +2
Energy: –
Handiness: Very handy
Basic ammo: –
Cost: 5000
Description: Rapid pulse beam weapons are a common armament for aerodynes. Beam weapons will only hit their targets once in any given roll to hit, but add 4 to the penetration and +4 to the damage of the weapon for each Success Grade of the hit.

Beam weapons halve all DRM's for moving targets. They have a short range of 1000, a medium range of 2000, a long range of 4000 and an extreme range of 8000 meters while firing within atmospheres.

Heavier beam weapons (of double or triple the above power) are common armaments for point defense stations or starship tertiary mounts. Aerodynes struck by starship ordnance or main beam weapons will be destroyed.

Beam weapon "flash": The flash and dazzle of nearby beam weapon strikes may temporarily blind unprotected characters. Personnel who are neither inside a vehicle nor wearing a lowered vacc suit flash visor, and who are close to the impact point of a beam weapon, must roll 1d6. On a result of 6 (or on a 5 or 6 for creatures with superior night vision) they will have been temporarily blinded (all creatures receive a +1 DRM at night).

Beam weapons may be fired in a suppressive mode, aiming specifically to blind rather than to kill.

Temporarily blinded characters must roll again to determine the duration of the blindness:

Duration of Flash Blindness Effects

1d6	Effect and Duration
1	Totally blind until properly treated
2	Totally blinded for 1 hour, and then +2 DRM on all vision-oriented activities until properly treated
3	Totally blinded for 20 minutes, after which there is a +2 DRM on all vision oriented activities until properly treated
4	Totally blinded for 10 minutes, after which there is a +1 DRM on all vision oriented activities until properly treated
5	+1 DRM on all vision oriented activities until properly treated
6	+1 DRM on all vision oriented activities for next hour

GRENADES

Grenades and explosive weapons come in several types. EDF troops are not normally issued with specialized grenade types, relying mostly upon variable grenades. Flechette grenades see almost no use at the current period of time, and are thus not included in the equipment lists.

Grenade fragments do not normally penetrate very deeply, and thus use column 2 on the Damage Determination Chart. Normal body armor provides no protection against blast damage. Blast damage does not roll for hit location. Characteristic DRM's from blast wounds apply to all characteristics.

Grenade Statistics

Missile type	Penetration	Frag damage	Blast damage
32mm concussion grenade	N/A	N/A	+1
48mm concussion grenade	N/A	N/A	+2
32mm fragmentation grenade	0	-2	+1
48mm fragmentation grenade	0	-2	+2
32mm armor piercing (AP) grenade	6	(+7)	+0
48mm AP grenade	7	(+8)	+0

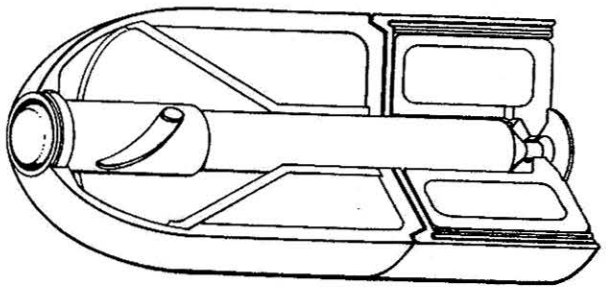
Chemical effect grenades

Available in 32 and 48 mm versions, these are available in incendiary, smoke and illumination versions. Incendiary grenades (and also gas bombs) shower the target with burn effects (use wound column 2; damage = 0). The flame will burn for 3d3 turns, rolling for hit locations every turn. Pretty? Incendiary and smoke grenades obscure the target hex with a cloud of smoke which will usually last for one minute (or four turns if tear gas). Illumination rounds illuminate an area thirty meters in radius, and will burn any location directly hit by such a round with a burn effect (damage 10).

Variable grenades

EDF 32mm variable grenades are dual purpose weapons which may be set either for fragmentation blast or armor penetration simply by varying the fuse setting. The ConFed EDF forces will not normally be equipped with specialized grenade types, and rely almost entirely upon their variable grenades and hand grenades.

Variable grenades are self propelled, but may be thrown by hand. Their armor piercing mode is of little use when thrown by hand, since there is no way of guaranteeing that the hollow charge will strike its target front end on. When fired from a launcher, stabilizing fins deploy to give the weapon a stable trajectory. Variable grenades are usually set for fragmentation effect. Changing the setting on a grenade fuse takes one action.



Grenade weights

32mm grenades weigh .25kg for hand thrown versions, or .4kg for self-propelled/ variable versions. 48mm grenades weigh .4kg for hand-hurled versions, and .7kg for self-propelled grenades.

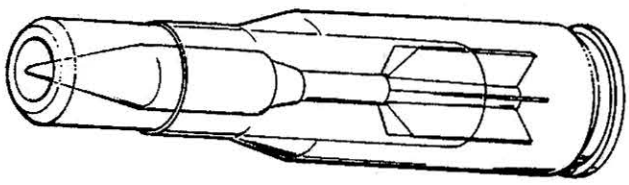
MISSILE WEAPONS

The firearms used in Albedo are people-killing tools–the weapons of murder. The only non-military firearms are those used for target shooting (a sport which enjoys a limited popularity in some low population density areas). "Sport" weapons do not usually have the advanced features of military versions, and military "dart" ammunition is rarely sold commercially.

The small arms used in Albedo all rely upon kinetic energy to affect their targets, and are thus largely similar to modern firearms. It is in the peripheral areas of ammunition types and targeting systems that Albedo's military firearms differ from modern models.

Military firearms are equipped with target illuminating lasers which are "reflexed" through the weapon's optical sights. Laser-equipped firearms receive reduced penalties for firing unaimed shots at ranges of up to 60m. A second use for target illuminators is as a range finder, allowing accurate range readings to be made at out to 300m. Laser target illuminators may use either visible light or IR (which will be visible to characters using CCD equipment).

Many military weapons come with telescopic sights as standard equipment. Smart sights will be a common addition to tripod mounted weaponry.



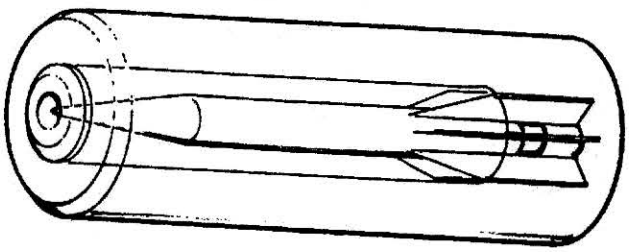
Firearm Calibers

Military ammunition is split into two main calibers, 8mm and 6mm.

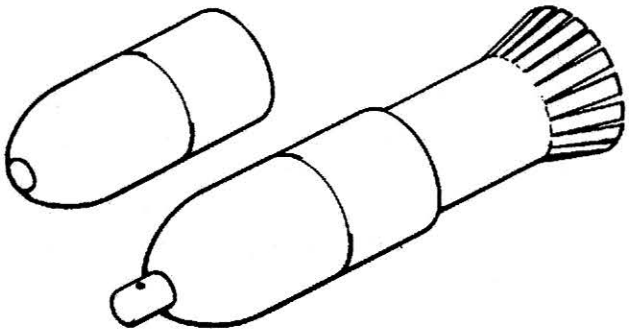
The EDF uses 8mm cased ammunition in its standard weapons. EDF 8mm caliber military bullets are sub-caliber hard bodied saboted darts (4mm inner core) coated in a friction reducing substance (such as teflon).

By projecting 4mm projectiles out of 8mm barrels, the 8mm sub-caliber dart round manages to achieve phenomenally high velocities, giving it extremely high armor penetration.

The ILR uses caseless 6mm ammunition, usually a 4mm saboted dart. While the arrangement is compact and can make for a simpler weapon action, pistol loads are less effective, especially against armor, than the EDF equivalents. Rifle loads are roughly equal.



The ammunition statistics chart lists the important characteristics of each type of small arms projectile. Damage and penetration are rated at short, medium, long and extreme ranges.



Weapon Recoil Values

Weapon	Recoil Value
4mm pistol	0
6mm pistol	0
8mm pistol	1
10mm pistol	2
12mm pistol	3
4mm longarm	1
6mm longarm	2
8mm longarm	3
10mm longarm	4
12mm longarm	5
Shogtun	4
Wild burst	+1

There is no recoil penalty for tripod-/bipod-supported weapons.

Ammunition Costs

Sporting cal, 100 rounds: 12
6mm cal, 100 rounds: 30
8mm pistol dart, 100 rounds: 35
8mm short/long cal, 100 rounds: 35
8mm short/long dart munitions, 100 rds: 40
10mm cal, 100 rounds: 100
12mm cal, 100 rounds: 120
16mm cal, 100 rounds: 160
Hand grenades, per round: 25
Self-propelled grenades, per round: 40

Now you know how wars get to be an expensive business . . .

Magazine Weights (kg)

Mag Capacity	Caliber							
	4mm	**6mm pistol**	**6mm rifle**	**8mm pistol**	**8mm rifle**	**10mm**	**12mm**	**16mm**
8 rds	.05	.07	.07	.10	.17	.40	.48	.80
12 rds	.06	.10	.11	.12	.20	.60	.72	1.2
16 rds	.08	.13	.15	.16	.27	.80	.96	1.6
20 rds	.10	.16	.18	.20	.36	1.0	1.2	2.0
24 rds	.12	.19	.22	.24	.40	1.2	.15	2.4
32 rds	.16	.26	.28	.32	.54	1.6	1.92	3.2
48 rds	.24	.39	.43	.48	.80	2.4	2.9	4.8
100 rds	.50	.80	.90	1.0	1.80	5.0	6.0	10.0

Cross reference the number of rounds held in the magazine (left column) with the size of the round (top line, bold print) to find the approximate weight of the magazine in kilograms.

The lists below specify the sum of the weapons currently produced by the various governments of known space. Some of the most likely custom made weaponry has also been listed. Each weapon's range statistics are split into four sections, these being the figures relevant to the weapon's short, medium, long and extreme ranges. All weights listed are the weight of the loaded weapon.

Standard military weapons in the ConFed vary from world to world. For instance, the Ekosiak Homeguard supplements its supply of EDF pattern assault rifles with locally produced assault carbines, both of which take the standard EDF 8mm x 50 cartridge. Sport weapons tend to be small caliber semi-automatic versions of military small arms. The limited military experience of the culture of Albedo has led to simple small arms formats (conventional stock-grip-magazine layout). "Bullpup" and top mag loading weapons are yet to develop.

Pistol
Caliber: 6mm and 8mm (custom models in 10mm and 12mm are available)
Handiness: Very Handy
Ranges: 20/40/50/NO
Magazine Capacity: 20 (6mm) or 16 (8mm)
Weight: 1
Cost: 400-700 (custom models at 1200+)
Description: Magazine fed semi-automatic handguns. Not designed for combat in an environment where body armor is common, pistols are mainly used as an effective defensive armorment. Pistols are not capable of automatic fire.

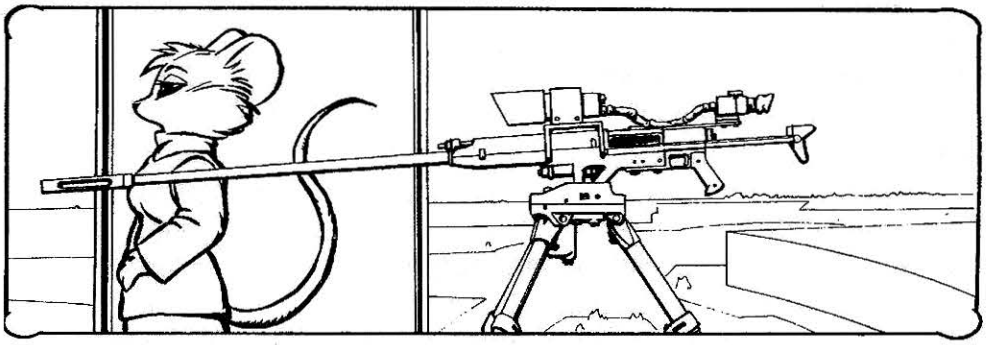
Machine Pistol
Caliber: 6mm and 8 mm
Handiness: Very Handy
Ranges: 20/40/50/NO
Magazine Capacity: 24
Weight: 1.5
Cost: 600-800
Description: A fully automatic pistol. These devices are uncommon except as the sidearms of armored vehicle crews.

Sub-machine Gun (SMG)
Caliber: 6mm and 8mm
Handiness: Very Handy
Ranges: 20/50/60/75
Magazine capacity: 32
Weight: 2.5
Cost: 600-1000
Description: This category covers a variety of short, handy weapons. SMG's are essentially longer barreled versions of the machine pistol. Designed for close work and high rates of fire, SMG's are used primarily by terrorists, security troops and police.

Assault Carbine
Caliber: 4mm, 6mm and 8mm
Penetration Modifiers: -1 at extreme range
Handiness: Handy
Ranges: 20/100/150/200 (4mm)
20/100/200/250 (6/8 mm)
Magazine Capacity: 48 (4/6mm); 24 (8mm)
Weight: 3 (4/6mm); 3.5 (8mm)
Cost: 900-1500
Description: A shorter barreled version of the assault rifle, assault carbines are popular for close work. More effective than an SMG, assault carbines are found sown through most infantry squads and security teams.

Most assault carbines will have folding stocks. When the stock is folded, the weapon becomes Very Handy, but may not be used for aimed fire.

Assault Rifle
Caliber: 4mm, 6mm or 8mm
Handiness: Average
Ranges: 20/100/200/300 (4mm)
20/100/250/350 (6/8mm)
Magazine Capacity: 48 (4/6mm); 24 (8mm)
Weight: 3.5 (4/6mm); 4 (8mm)
Cost: 1000-1600
Description: The standard military small arm. Assault rifles are light, robust weapons capable of effective automatic fire out to medium ranges. Assault rifles are military weapons par excellence, and will rarely be available to the public.



Most assault rifles are equipped with folding stocks. When the stock is folded, the weapon becomes Handy, but may not be used for aimed fire.

Light Machine Gun (LMG)
Caliber: 6mm or 8mm
Handiness: Very Cumbersome
(Average when set up on bipod/tripod)
Ranges: 50/200/300/600
Magazine Capacity: 100+
Weight: 8 (6mm); 10 (8mm)
Spare barrels weigh 1.5 kg
Cost: 1200-2000
Description: As a support weapon for infantry squads, the light machine gun reigns supreme. LMG's may be fired when not set up, with range difficulty brackets identical to the assault rifle.

LMG's may be fitted with a heavy tripod mount (weighing 3kg) which provides a very stable base for firing. Tripod-mounted machine guns do not receive adverse DRM's for subsequent shots at a target without aiming. In addition, tripod-mounted weapons extend their medium, long and extreme ranges by 100m. Tripods take four actions to set up.

Tripod-equipped LMG's may be equipped with a passive coolant system for the barrel and chamber, converting them into sustained fire machine guns (SFMG's). SFMG's weigh 20% more than the normal LMG, and receive a DRM of -1 when rolling on the breakdown effects chart.

Sniper's Rifle
Caliber: 10mm, 12mm or 16mm
Handiness: Very Cumbersome
Ranges: 50/500/800/1000 (10/12 mm)
50/500/700/800 (16mm)
Magazine Capacity: 16 (10mm), 8 (12mm), 8 (16mm)
Weight: 12 (10mm), 13 (12mm), 16 (16mm)
Cost: 2500-3000
Description: Semi-custom weapons available with just about any combination of features. Sniper's rifles are hypervelocity weapons supported on a tripod mount, designed for use as a high accuracy, single shot/controlled burst weapon. Due to the hypersonic "crack" of the rounds fired, no silencing equipment is bothered with, but sights are essential to the proper deployment of the weapon. Some models will have the ability to fire controlled bursts.

Sports Rifle
Caliber: 4mm or 8 mm
Handiness: Cumbersome
Ranges: 20/120/200/300 (4mm)
20/150/250/500 (6/8mm)
Magazine Capacity: 16 to 24
Weight: 5
Cost: 750-1000
Description: Also called the "long rifle" when used in a military role, sports rifles are self-loading, semi-automatic weapons used for rapid and accurate long range fire. They are not capable of automatic fire.

Shotgun
Caliber: special
Handiness: Cumbersome
Ranges: 20/50/NO/NO
Magazine Capacity: 8
Weight: 4
Cost: 300-700
Description: A police weapon, the shotgun is a primitive but effective means of delivering a heavy weight of shot against a target. Shotguns fire heavy slugs, which have a damage rating of +3, or "shot", which spreads its damage over more than one area at medium range. At short range shot has a damage rating of +2. At medium range, a hit by a shotgun firing shot will attack four different hit locations with damage -2. Shotguns firing shot roll versus 10 (rather than 12) when testing for a hit at medium range. Shotguns have a recoil of 4, and may not use automatic fire.

MISSILE WEAPON ATTACHMENTS

The following systems are designed to be added to the missile weapons detailed above. Many weapons are designed with such equipment already integrated into the weapon's basic configuration. Such weapons are notably lighter than those which are not specifically designed to include such equipment.

Gas Compensator
Cost: 100
Weight: .3
Description: Despite the good muzzle brakes fitted to all firearms, the recoil of any gun under zero-G conditions makes it difficult to control. A gas compensator is a clip-on unit designed to balance the recoil of firearms with a backwards blast of compressed gas. Weapons not equipped with compensators in zero-G receive +1 DRM for any unaimed shots, and add one to their effective recoil rating. Stabilizer cartridges hold gas sufficient to counteract the effects of eight shots. Spare gas cartridges cost 10 credits and weigh .1kg.

Smart Sights
Cost: 500-1000
Weight: .5
Description: Targeting computer-assisted sights linked with a laser range finder which automatically adjust for the range of the target, windage, etc. Smart sights give the same firing bonuses as telescopic sights, but also double the extreme range of direct fire weapons when an extra action is spent on aimed or carefully aimed shots. Smart sights will only give a bonus to weapons which have a firm, stable base (i.e., a tripod). Weapons equipped with smart sights subtract one level from their handiness rating when firing aimed shots.

Telescopic Sights
Cost: 250-500
Weight: neg
Description: Telescopic sights increase the shooter's accuracy at long and extreme ranges by granting a -1 DRM to hit on any aimed shot with direct fire weapons.

Telescopic sights are often fitted with CCD lenses to make them efficient night fighting aids. Many telescopic sights are capable of being dismounted from weapons and used as a hand-held telescope, often with the addition of a light pistol grip.

HEAVY WEAPONS

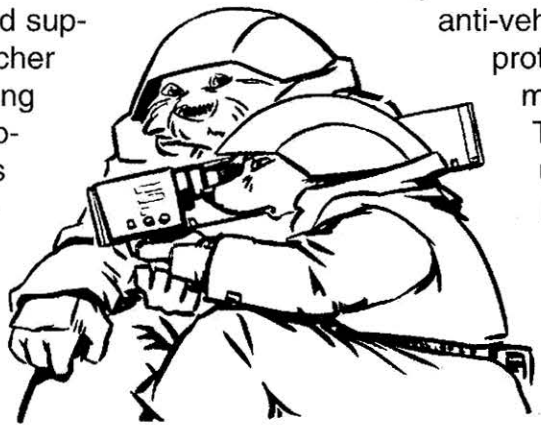
Heavy weapons are used in support of normal infantry sections. Each type of heavy weapon (e.g., grenade launchers, auto GL's, missile launchers, etc.) is its own skill.

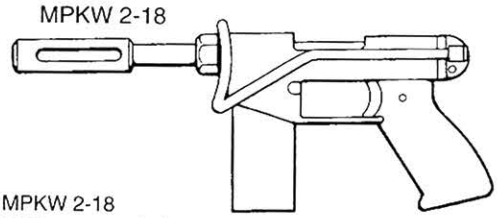
Light Grenade Launcher
Caliber: 32mm grenade
Handiness: -1 from normal weapon handiness rating (i.e., Very Handy becomes Handy)
Ranges: 20/50/100/150
IDF range = 100-300m
Magazine Capacity: 1
Weight: 1.2 or 1.5
Recoil: 1
Cost: 300
Description: Used as a supplement to many assault weapons, the light grenade launcher is attached to the underside of assault rifles and the like as an "over and under" attachment. Light grenade launchers project rocket-propelled grenades (thus their low recoil).

Grenade Launcher
Caliber: 32mm or 48mm grenade
Handiness: Very Cumbersome
Ranges: 20/80/120/160
IDF range = 100-400m
Magazine Capacity: 4 (32mm); 3 (48mm)
Weight: 5
Recoil: 1
Cost: 800
Description: A standard squad support weapon, the grenade launcher is a magazine- fed, self-loading weapon which projects self- propelled grenades out to distances of up to 400m. The EDF uses this system in 32mm caliber (projecting variable grenades), while the ILR (and some Homeguard forces) use 48mm caliber.

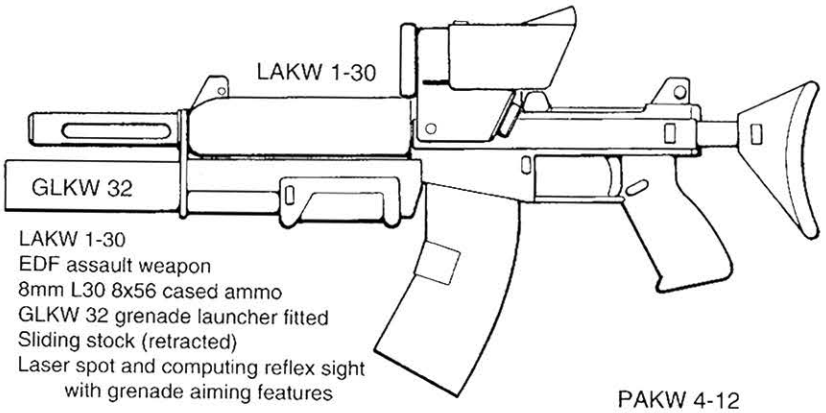
Auto Grenade Launcher
Caliber: 32mm grenade
Handiness: Cumbersome
Ranges: 50/200/300/500
IDF range = 500-1500m
Magazine Capacity: 20
Weight: 15
Recoil: 1
Cost: 1500-2000
Description: A tripod-mounted, fully automatic version of the grenade launcher which is used as a platoon support weapon or a vehicle-mounted weapons system. When firing a burst of grenades, roll to hit in the usual manner detailed for auto fire weapons, scoring one additional hit in the target zone for every two points the player rolls under the required minimum score to hit. Missed shots scatter in the usual way.

Heavy Machine Gun (HMG)
Caliber: 10mm
Handiness: Cumbersome
Ranges: 50/300/500/800
Magazine Capacity: 100+
Weight: 16
Cost: 1500-2200
Description: A common military vehicle armorment and company support weapon, the HMG fires 10mm slugs at velocities designed to do cruel and rude things to the target's body. An HMG is of no real use in an anti-vehicle role due to the high protective qualities of monomolecular laminate armor. The HMG cannot be fired unless properly supported on a pintel or tripod mount, whereupon it shares the firing characteristics of a SFMG.

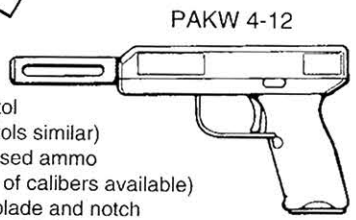




MPKW 2-18
EDF commander's arm (machine pistol)
8mm L18 8x24 cased ammo (3x32 version available)
Wire stock (folded)
Laser spot

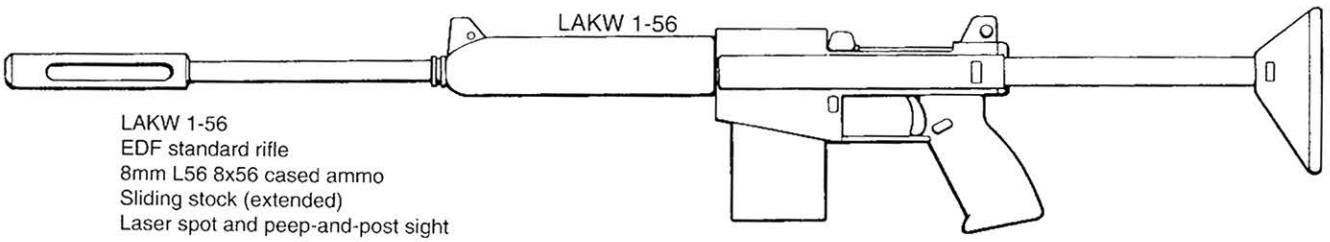


LAKW 1-30
EDF assault weapon
8mm L30 8x56 cased ammo
GLKW 32 grenade launcher fitted
Sliding stock (retracted)
Laser spot and computing reflex sight
with grenade aiming features

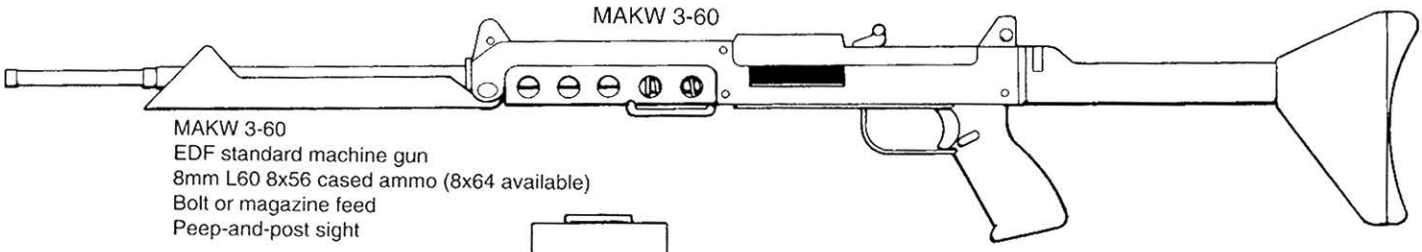


PAKW 4-12
EDF standard pistol
(all other pistols similar)
8mm L12 8x24 cased ammo
(wide variety of calibers available)
Sighting ramp or blade and notch
(laser spot available)

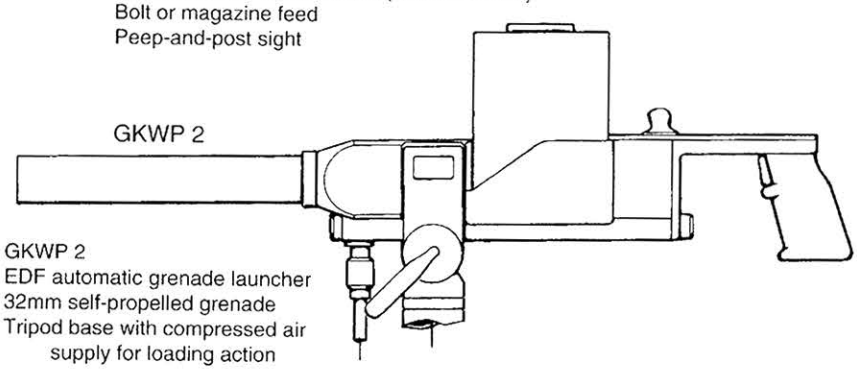
ILR or Homeguard bullet-projected grenade
AP/frag selectable. AP, HE, frag, or special effect types available
Can be fitted and launched from any muzzle-shrouded weapon



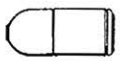
LAKW 1-56
EDF standard rifle
8mm L56 8x56 cased ammo
Sliding stock (extended)
Laser spot and peep-and-post sight



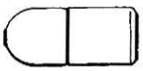
MAKW 3-60
EDF standard machine gun
8mm L60 8x56 cased ammo (8x64 available)
Bolt or magazine feed
Peep-and-post sight



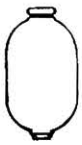
GKWP 2
EDF automatic grenade launcher
32mm self-propelled grenade
Tripod base with compressed air
supply for loading action



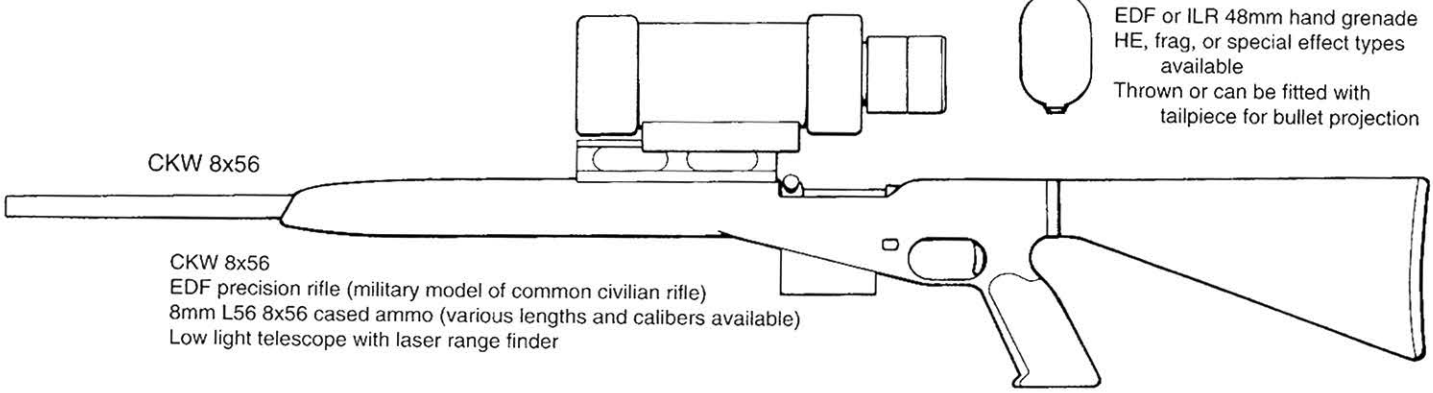
EDF 32mm variable grenade
AP/frag selectable
Thrown or self-propelled



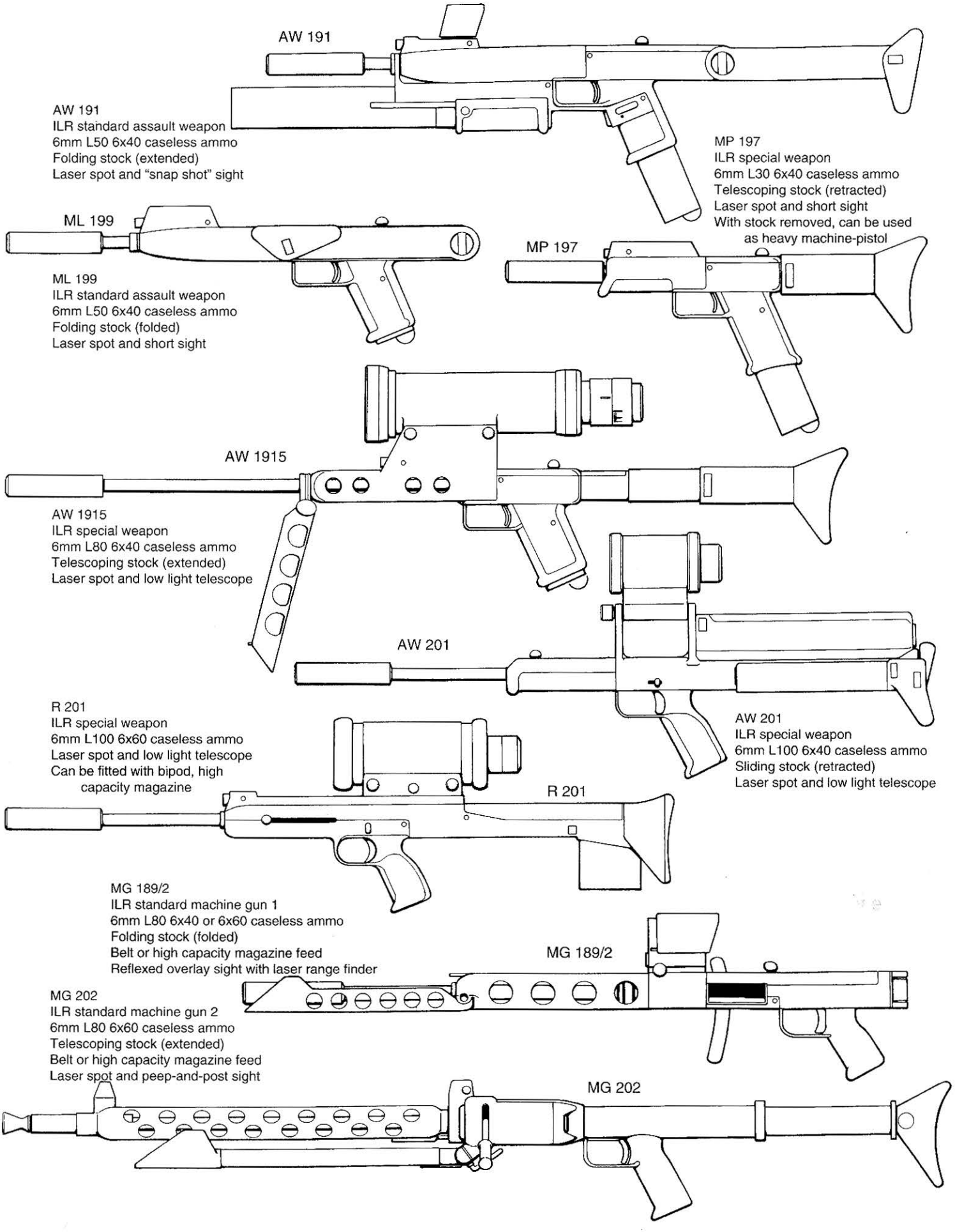
EDF or ILR 40mm variable grenade
AP/frag selectable
Thrown or self-propelled



EDF or ILR 48mm hand grenade
HE, frag, or special effect types
available
Thrown or can be fitted with
tailpiece for bullet projection



CKW 8x56
EDF precision rifle (military model of common civilian rifle)
8mm L56 8x56 cased ammo (various lengths and calibers available)
Low light telescope with laser range finder


AW 191
AW 191
ILR standard assault weapon
6mm L50 6x40 caseless ammo
Folding stock (extended)
Laser spot and "snap shot" sight
MP 197
ILR special weapon
6mm L30 6x40 caseless ammo
Telescoping stock (retracted)
Laser spot and short sight
With stock removed, can be used as heavy machine-pistol
ML 199
ML 199
ILR standard assault weapon
6mm L50 6x40 caseless ammo
Folding stock (folded)
Laser spot and short sight
MP 197
AW 1915
AW 1915
ILR special weapon
6mm L80 6x40 caseless ammo
Telescoping stock (extended)
Laser spot and low light telescope
AW 201
AW 201
ILR special weapon
6mm L100 6x40 caseless ammo
Sliding stock (retracted)
Laser spot and low light telescope
R 201
ILR special weapon
6mm L100 6x60 caseless ammo
Laser spot and low light telescope
Can be fitted with bipod, high capacity magazine
R 201
MG 189/2
ILR standard machine gun 1
6mm L80 6x40 or 6x60 caseless ammo
Folding stock (folded)
Belt or high capacity magazine feed
Reflexed overlay sight with laser range finder
MG 189/2
MG 202
ILR standard machine gun 2
6mm L80 6x60 caseless ammo
Telescoping stock (extended)
Belt or high capacity magazine feed
Laser spot and peep-and-post sight
MG 202

Portable Missile Launcher (PML)
Caliber: Light missile
Handiness: Very Cumbersome
Ranges: 100/500/3000/4000
(minimum range = 50m)
Magazine capacity: 1
Weight: 6
Recoil: 0
Cost: 800-1000
Description: A man-portable infantry support weapon designed to be operated by a crew of two. More portable and flexible than a mortar, PML's are capable of firing anti-armor, anti-aircraft, and fragmentation missiles to distances of 4km. For long range fire PML's rely upon laser-guided rounds which home in on coded laser target illuminators. The anti-armor missile is a very poor weapon in the anti-armor role. The anti-aircraft missile is a passive infrared homing missile, and is nowhere near as effective as specialist anti-aircraft guns (although it is occasionally devastating when used with surprise). Missiles are treated as indirect fire weapons for the purposes of the timing of fire.

Half the loader's actions are added to the gunner's maximum possible actions to yield the total actions allowed to the weapons crew. It takes three actions to load a PML, one to aim it, and one to fire it.

Fragmentation missiles cost 2000 credits apiece. Anti-tank missiles cost 3000 credits each. Anti-aircraft missiles cost 5000 credits each. Missiles weigh 3kg. Chemical effect and illumination rounds are available, and have effects much like the grenades specified on page 95..

Missile Effects

Missile Type	Effect
Armor piercing missile	Pen 23, Dam+10
Fragmentation missile	Blast +3, 10m radius

EDF AND ILR EQUIPMENT SUMMARY

EDF
Standard small arms caliber: 8mm dart
Grenades: 32mm variable
Vehicles: Usually tracked
Body armor: Impact armour & battle helmets (vacc suit helmets for officers)
Personal communicators: Helmet mounted
Comments: A variety of lighter small arms calibers are available for use by the more lightly built elements of the EDF soldiery. EDF troops rarely carry specialized grenade types, and rely upon their variable grenades for general purpose use. All EDF equipment is designed to contribute to the EDF's role as a flexible, highly mobile, rapidly deployable force.

ILR
Standard small arms caliber: 6mm dart
Grenades: 48mm
Vehicles: Usually wheeled
Body armor: ILR body armor & battle helmet
Personal communicators: Usually headset mounted
Comments: The ILR are more likely to use rare weapons such as flechettes, specialist grenades, etc. On the whole, their equipment is well standardized, minimizing logistical difficulties.

MELEE WEAPONS

The starfaring culture of Albedo lacks primitive martial arts traditions, never having passed through periods of medieval technology. The melee weapons available to characters are thus confined to the simplest, most practical of types.

EDGED WEAPONS

Bite
Damage: -1 (0 for carnivores)
Penetration: 0
Length: 0 (1 for Ratites)
Weight: N/A
Cost: N/A
Description: Most critters have a fairly good set of teeth, which can be used to good effect in a brawl. When a critter has grappled an opponent, he may opt to use a bite as his next action. The bite will succeed on a roll of the character's Coordination or Coolness under Fire versus 10. Such bites will roll 1d2 for hit location. Ratites may use a bite attack in much the same manner as a punch. The damage of a bite attack is multiplied by 1/10 x the attacker's Strength.

Knife
Damage: 0
Penetration: 0
Length: 0
Weight: neg
Cost: 25-250
Description: Small edged weapons with light blades. The typical knife has a blade length of about 15cm. This class of weapons includes flick knives, clasp knives, boot knives, etc.

Heavy Knife
Damage: 0
Penetration: 1
Length: 1
Weight: .3
Cost: 100-250
Description: Larger, heavier knives such as Bowie knives, tantos, long daggers and such. Due to the length and breadth of their blades, these weapons are capable of dealing a far nastier wound than their smaller cousins. When placed on the end of a rifle or SMG, a knife becomes a bayonet, and becomes a length 3 melee weapon. Bayonets have a penetration of 4.

Machete
Damage: +1
Penetration: 0
Length: 2
Weight: .6
Cost: 20-50
Description: Large, broad bladed knives designed for cutting and chopping. They are common tools, but are quite capable of severing a man's head from his shoulders.

Axe
Damage: +2
Penetration: 1
Length: 3
Weight: 2.5
Cost: 50-75
Description: More common as a tool than as a weapon, the axe exists in Albedo as a common implement in any tool shed, and thus is included here as a possible improvised weapon. Axes use column 2 on the Damage Determination chart.

IMPACT WEAPONS

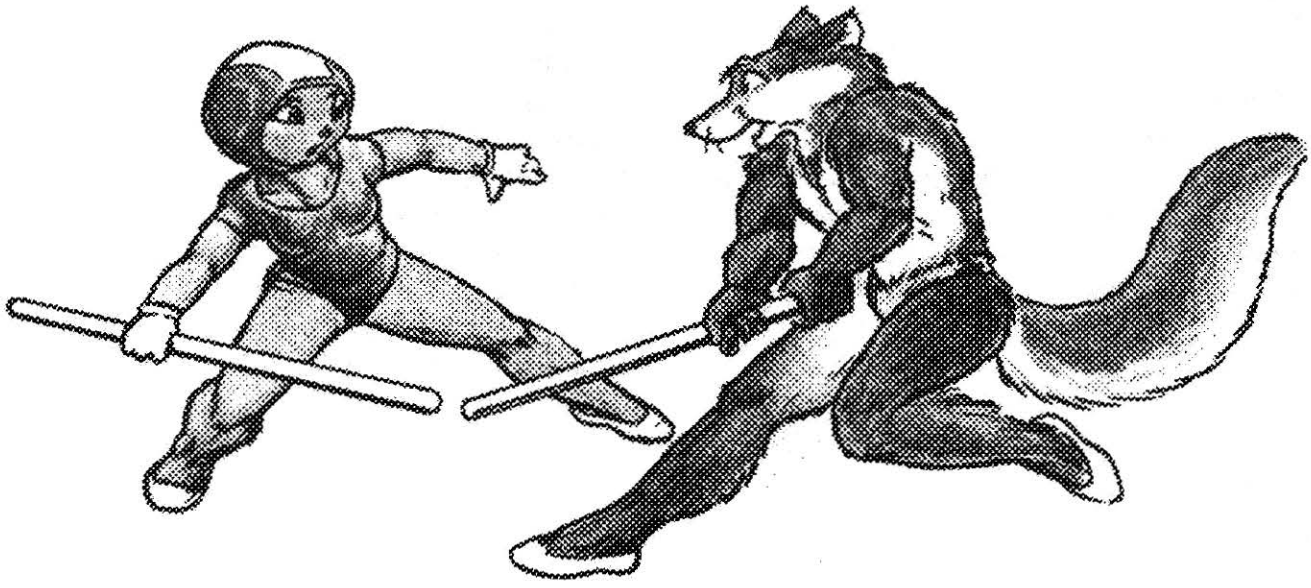
Fist
Damage: -2
Penetration: 0
Length: 0
Weight: 0
Description: Any blow with the hand. Punches delivered by critters of ungulate descent have a damage rating of +1, while punches delivered by avians have a damage of -1. Non-ratite avians have the option of delivering a wing buffet, which has a range of 2 and a damage of -3.

Kick
Damage: -1
Penetration: 0
Length: 2
Weight: 0
Description: Kicks are dealt with a higher strength than punches, but have a +1 DRM on the character's roll to hit. Non-ratite avians have a kick range of only 1.

Club
Damage: 0-+1
Penetration: 0
Length: 1-2
Weight: 1
Cost: ?
Description: Wrenches, pipes and pieces of 2"x4". This category covers most improvised impact weapons.

Fighting Stick
Damage: +1
Penetration: 0
Length: 1-3
Weight: 1/2 (practice stick) or 1
Cost: 12
Description: A meter-long staff which is used in the martial art of stick fighting. Practice sticks are padded plastic rods, while the combat version is of more solid construction. Characters who have skill in stick fighting could use pipes or similar rods to much the same effect. Practice sticks cause no damage to the target when they hit, but will instead deal 1 point of Fatigue.

The fighting stick is a versatile device which may be used as a length 1, 2 or 3 weapon. At length 3 it is used for thrusting, and uses damage column 3 on the damage determination chart. At other ranges it is swung, and therefore uses damage column 4.



BACKGROUND HISTORY

The society of Albedo is a young culture. History effectively began some 200 years ago on the planet of Arras Chanka with what could be best described as an awakening. Over a period of several years, individuals began to realize that they had no adequete explanations to account for the creation of their sophisticated technical civilization. The question brought about a period of intense investigation which eventually established that there was not only no archaeological evidence of a prehistory on the planet, but also that there was no significant genetic relationship between the 163 intelligent races that made up the population of the planet's biosphere. The conclusion was that the inhabitants of the planet Arras Chanka were the result of some manner of colonization effort by some unknown agency, carried out at some indeterminate time in the near past. This theory has yet to be confirmed or denied.

The thought of an extraplanetary (or more likely an extrastellar) origin of civilization prompted the development of space flight technologies. The creation of an efficient fusion propulsion system, coupled with the later development of jump drive technology, led to a great outward drive of exploration and colonization, which established outposts in the 50-light-year diameter sphere of space surrounding the old home world. This first wave of colonization was a carefully organized and systematic affair involving fifteen planets over a fifty year period. The dedication and professionalism of these early colonists have now become a part of these planet's distinct cultures. Twelve of these colonies survived and prospered, to become the charter members of the Confederation in the current age.

The next wave of colonization encompassed more than fifty viable planets over an area some 100 light years in radius. The second colonization effort was more casual in its approach, and the colonial populations often established more radical socio-economic environments. As the decades passed, these planets established themselves as independent worlds in their own right, and began to colonize other worlds in the 200-light-year radius zone of surveyed space (the tertiary colonies and "rim worlds").

Two of the established secondary colonies, Hiahhohch and Baliannian, had populations mostly composed of rabbits. These worlds decided that the continued expansion of their particular societies would be best furthered by the takeover of the built-up infrastructures of their neighbors rather than the development of new worlds from scratch. So began a messy and protracted war between the so-called Independent Lapine Republic and a hastily formed confederation made up from just about everybody else. The huge potential production capacity of the Confederation was slow to show results against the massive Republican forces, which had been so carefully built up over the preceding years. As the war dragged on, campaigns became characterized by brutal, bloody encounters, atrocities, and acts of insane bravery (or foolishness) from both sides. The Republic's expansion was bloodily halted after it managed to assimilate a number of systems, some of which were later released as part of the peace agreements.

As it now stands, the ConFed is formed from the twelve original colony worlds with a number of allied secondary colonies. The ILR consists of a tight ball of space some twenty light years in diameter, which contains the two original Lapine worlds coupled with their earliest conquests. A looser scattering of Republican dependents and allies surrounds the

inner sphere of ILR claimed space. For eighteen years an uneasy cold war dragged on, with the ConFed formalizing and reorganizing its military forces against the chance of renewed hostilities. For eighteen years the uneasy peace was held.

Now the peace has been broken. The ILR has begun military adventurism, which has prompted a rapid response from the ConFed war machine. A small ILR expeditionary force infiltrated and siezed the colony world of Derzon, an action which prompted immediate retaliation from the local EDF response force. In a textbook assault on the planet Derzon and its main city of Andis, a ConFed force of 8000 troops succeeded in destroying over 800 ILR soldiers–at a cost of 5000 civilian lives and incalculable loss of property.

EDF intelligence has now determined that the ILR forces were deliberately dispersed among the local population centers in an attempt to maximize the civilian casualties/collateral damage caused by the EDF counterstrike. This revelation has had little effect on the popular media, however, which has launched a campaign questioning the intractable EDF doctrine of securing the outworld territories.

A period of skirmishes and terrorist acts has begun. While no formal war has been declared, the Confederation is now on a war footing, and awaits the next move in the struggle. A number of unscrupulous third parties and individuals are exploiting the confused, hostile political environment, easily masking their activities as the work of the ConFed or ILR governments.

POLITICAL STRUCTURE

Known space is an irregular sphere which is about 200 light years in radius. Most of this area is occupied by the ConFed, except for a smaller sphere of ILR territory. The periphery of known space is referred to as "the rim", and contains a number of independent, unaligned worlds.

ConFed space surrounds and restricts the Republic. Should the ILR decide to expand, its only path is to assimilate ConFed systems.

CONFED: THE INTERSTELLAR CONFEDERACY

The ConFed is composed of a number of member worlds, each of which is highly independent and which maintains its own military and governmental structures. The ConFed charter states that the rights of individual planets are inviolable providing member worlds do not seek to impose their own socio-political structures upon other worlds.

The ConFed government (ConFed Central) is formed by representatives from each member world, one representative being allowed to each world for every 10 million population resident on the planet. The ConFed is thus the glue which binds together a group of worlds which would otherwise be isolated and independent.

The ConFed is therefore a fairly loose society. Individual governments must contribute resources and personnel to ConFed projects, but the worlds maintain their ability to enter independent ventures. The ConFed government has thus far shown itself to be canny, and as benevolent as any government can realistically hope to be.

EDF: THE EXTRAPLANETARY DEFENSE FORCE

The EDF is the military elite of the ConFed. The EDF is recruited from the Homeguards of all member states.

The EDF was formed as a collective fighting force, initially to counter aggression from the ILR. Later it helped prevent internal conflicts from escalating to interplanetary or interstellar scale. Because of the great distances often involved, and the subsequent delays in communications with higher authority, EDF officers are selected and trained for the greatest reliability and initiative in on-the-spot situations. These elite individuals are not so much gung-ho super soldiers as they are dedicated warrior/intellectuals, equally able to maintain the peace through enlightened arbitration or force of arms.

The EDF combines ground and spatial forces which far exceed the strength of any group of individual ConFed member worlds, and includes the full complement of the ConFed's interstellar warships. In wartime, EDF forces, supported by combat support complexes (huge space-borne manufacturing stations) would cooperate closely with local Homeguard units, which often have the heavy vehicles and equipment that the highly mobile EDF forces lack. ConFed member worlds support military efforts with "on hand" production capability, allowing equipment losses to be replaced and special tools to be constructed as a campaign wears on.

THE HOMEGUARD

Homeguard military forces are created and maintained by each planet for its individual defense and internal security. Members of a planetary Homeguard owe allegiance to the ConFed, but are recruited only from the mem-

ber world's population. They are thus often more deeply allied to their home world government and population than to the ConFed itself. Enlistment in the Homeguard is often a mandatory prerequisite for citizenship (alternative civil service is usually available in some cases), unlike the EDF, which is voluntary and extremely selective in its recruiting. With a more limited mission and immediate on-hand command control, Homeguard personnel are more like conventional armed services or militia in levels of discipline and training. Since Homeguards are expected to supplement the EDF in combat, they receive cooperative training.

Due to local requirements and variable resources, Homeguard arms and equipment tend to be more specialized then that used by the EDF, and reflect varying planetary tactical policies. Homeguards often use a variety of man-portable systems such as anti-armor and anti-aircraft missiles to partially compensate for their shortcomings in the realms of space-based and aerial fire support, which would normally deal with these threats.

ILR: THE INDEPENDENT LAPINE REPUBLIC

The ILR in its domestic policy is not so different from other second generation worlds. A sense of post-colonial independence has allowed the private sector to develop into providing most goods and services, and has largely kept government control out of the day-to-day lives of full citizens. In the realm of foreign affairs, the government's desire to maintain an artificially high standard of living, coupled with a touch of xenophobia, has allowed it to rationalize a policy of external aggression.

On the two original Republican planets and any conquered worlds, non-rabbits form a category of second class citizens, and are subordinate to their lapine rulers. While this is not much of a problem on Hiahhohoch and Baliannian, which had a minority of non-rabbits to begin with, on conquered worlds the Republican governmental system is harsh and repressive. Local rabbits were sought out immediately after conquest, and those who would not cooperate with the invaders were executed as traitors to the species. With the aid of local rabbits, effective population controls were established. Rabbits became superior citizens and hold all positions of any real importance, thus locking the planet under the iron rule of the Republic. Republican ally worlds are not in any way beholden to the ILR's peculiar "master race" theories, but are either impressed with the strong government or with the expansive economic opportunities.

The ILR military fight a hard and often dirty war. While not fanatics, ILR troops are highly motivated, and by and large lack any sympathy for their opponents. Acting entirely without malice, they will readily perform the most shocking atrocities, but only after coolly calculating the long range results and far reaching impacts. Republican troops will fight with great ferocity, but will surrender when it becomes clear that they can no longer cause damage to their opponents.

The ILR is currently engaged in a carefully designed and executed plan to weaken the ConFed by causing internal dissent. The core of this plan revolves around reducing local support for the ConFed central government on the outworlds, thus opening the possibility of governments which are hostile to the ConFed (and thus sympathetic to the ILR) coming to power. The ILR has begun a series of actions designed to discredit the EDF in the eyes of the outworld populations.

MILITARY FORCE

Warfare in Albedo is somewhat different from that "enjoyed" by 20th century Earth. The use of space craft and orbital weapons systems adds whole new elements to ground warfare. The armies of Albedo are still learning their trade, but their high initiative and inventiveness, as demonstrated by the high intelligence and adaptability of the common soldier, have allowed them to swiftly develop into formidable fighters.

EDF BATTLE DOCTRINE

Engaging Planetary Forces

In a textbook engagement, EDF starships will jump into the target system at the appropriate angle for an approach to the objective. Forces will disperse into a defensive globe and begin variable deceleration while undecelerated ACV's (autonomous combat vehicles–basically robot drones) sweep by the target world to assess the enemy forces. Many of these probes subsequently impact the enemy ground defenses at enormous velocity, their kinetic energy making warheads superfluous.

If the enemy forces exceed the attacking task force's resources, the attackers will maneuver away from the engagement and jump out of system as appropriate.

If the enemy can be subdued within the task force's reserve margin, then the engagement will proceed. New waves of ACV's are dispatched, arriving well ahead of the main fleet to engage all eligible targets on and off the planet's surface. Only when local space is pacified, and the chance of outsystem reinforcements unlikely, can a landing of ground forces be made.

Once space weapon systems have reduced the enemy's surface defenses, gunships and assault craft will converge on their objectives. Gunships will suppress the defense while assault craft unload the attacking ground forces, and air vehicles will provide continuous close support from above during the surface engagement. Ground troops rely heavily upon aerial weapons for "artillery" support, and must cooperate closely with vehicle-borne weapon systems if they hope to cope with enemy armor, which is now protected against most infantry-portable weapons.

The starships in orbit will continually monitor and coordinate the ground battle. Ideally a task force will be based around a Command Support Vessel (VLCSV), a combination carrier, command and control center with the production capability to support any forseeable trends in the ground action. In a protracted conflict, on-hand production capability will prove vital to the attacking elements.

System Defense

At the first detection of hostile forces, intercepting ACV's will be deployed. As the force and intent of the hostiles is confirmed, offensive/defensive resources are evacuated or dispersed as the situation allows. Most elements will be kept well dispersed to prevent the detection and destruction of any one element from jeopardizing its neighbors.

Personal Conduct Doctrine

The EDF devotes much time and effort to training its troops out of any tendencies to be trigger happy, thoughtless or easily rattled by stress and pressure. While training in the Coolness under Fire skill simulates this to a great degree, players should remember that the EDF requires its members to behave in a responsible, rational manner, and to evaluate the long range effects of any actions that they perform. Players who are incapable of acting

in this manner are clearly not suited to run a character who is serving in the EDF.

EDF personnel are encouraged to inflict damage to the enemy as long as they are able. This includes effectively suicidal efforts if capture is imminent. EDF personnel are not encouraged to allow themselves to be taken prisoner–information extraction and all levels of personal abuse are to be expected, as ILR troops are allowed more emotional leeway in their motivation than EDF personnel, and their indoctrination includes considerable xenophobic rhetoric.

The EDF's emphasis on reasoned, unemotive conduct does not encourage soldiers to endanger themselves for the sake of taking prisoners. ILR troops are at least as conscious of inflicting damage to the enemy as are EDF troops, and are often booby trapped. These booby traps can include chemical, explosive, bio-warfare and even nuclear/radiological devices. If enemy troops can be "safed", then they are treated humanely, but at a distance. (Note: EDF personnel, if given the opportunity, may attempt suicidal booby traps as a last ditch attempt to make an impact on the enemy.)

EDF doctrine recognizes the fact that if a situation cannot be efficiently defended, it is better to avoid engagement and conserve resources for future combat. EDF soldiers are dedicated professionals fighting a dirty opponent, and have had to adopt often ruthless doctrines in order to compete.

CIVIL UNREST

There are no set doctrines among most societies for dealing with civil unrest. It is only in recent years that governments have had to deal with organized riots, and therefore riot equipment such as tear gas and riot shields do not yet exist (although they could be fabricated).

In ConFed societies, rioters and demonstrators are viewed as citizens using their right to dissent. While troops have a duty to use any level of force required to ensure the security of military bases or the protection of innocent civilians, violence is only used against rioters as a last resort.

THE CONFED DIPLOMATIC SERVICE

The Confederacy employs a substantial corps of highly trained administrators and diplomats as a liaison between individual ConFed member worlds and the ConFed central government. On inner ConFed worlds, the diplomatic secretariat coordinates information exchange between worlds and governments, and provides information on ConFed policy which might not be available from the normal computer nets. On worlds which are only loosely affiliated with the ConFed central government, the diplomatic secretary acts as an ambassador.

It is in the outworlds that the most challenging and difficult work of the diplomatic service takes place. The diplomatic service is used to monitor and uphold ConFed policy upon member worlds, representing central policy versus the policies of local government. The diplomatic service on such worlds forms an on-the-spot extension of the ConFed central government capable of asserting the policies of the central government and advising local government. On outer ConFed worlds, the diplomatic service is a means of monitoring socio-political developments and advising local governments of their options for action. The ConFed diplomatic service is thus an important element in the "binding together" of the interstellar society of the ConFed, and often bears the brunt of the undeclared socio-political war which has recently come to light.

The powers of a planetary diplomatic service staff are limited by the ties which a world has with the ConFed government. On worlds which are only loosely affiliated with the ConFed, they have no civil authority at all. On the closely bound worlds of the inner ConFed, they act as direct extensions of the authority of the central government, with the power to withdraw official recognition from local governments. On the worlds of the outer ConFed, the diplomatic service may hold varying degrees of civil authority in emergency situations.

The diplomatic service is deployed by and is answerable to the main government of the ConFed–ConFed Central. Since the ConFed is made up of a collection of independent worlds, the policy of the diplomatic service is largely non-interventionist–it can advise local government, but may not usurp its authority except in circumstances where there has been a failure in the local transferrence of political power. The diplomatic service may act as moderators and mediators between hostile factions, and will closely monitor socio-political trends on ConFed member planets in order to better advise local authorities of their possible options. All ConFed member worlds have a ConFed "mission" (embassy) at their capital city from which the local representatives of the ConFed diplomatic service will operate.

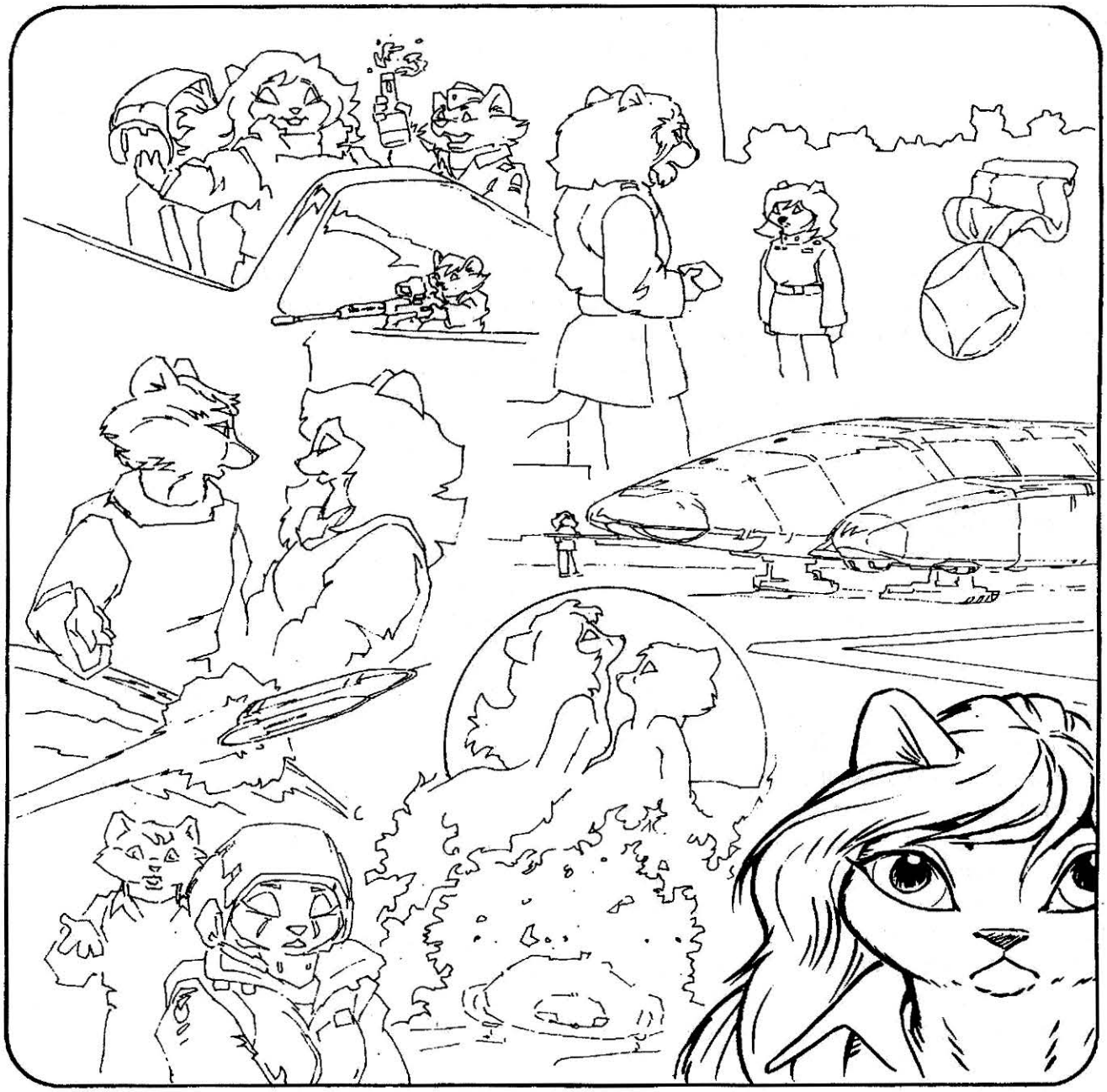
PERSONAL CONDUCT DOCTRINE FOR DIPLOMATIC PERSONNEL

Members of the diplomatic service operate under much the same parameters as EDF personnel. They are required to assess the long range consequences of their actions at all times, and to avoid any compromise of ConFed Central's policies, including its policy of self determination for local government (within the boundaries of maintaining civil order).

Diplomatic personnel are cleared to assume civil authority on ConFed member worlds only if this is absolutely required due to the breakdown of the local means of power transfer. This does not mean that diplomatic personnel may start a counter government in the case of a coup, unless such an action will prevent complete breakdown of civil order.

Diplomatic personnel are expected to identify and analyze dangerous social/political elements and trends, but are not authorized to take aggressive action against them unless this is required in order to prevent civil disorder. Direct intervention is preferably left to local authorities, eliminating the danger of public feeling being aroused against the ConFed.

The personal conduct of diplomatic staff and the role of a planetary diplomatic office are always modified to meet the local conditions.



LIFESTYLES

Over three periods of colonization and one major war, a great deal of social diversity has come about in the worlds of known space. The more recent colonies (tertiary colonies) are highly variable in their social and economic bases.

The worlds of ConFed space are now split into two definitions: "inner worlds" and "outworlds." The inner worlds are those planets which were settled during the first or second waves of colonization. They are fully independent economic and political entities. The twelve old "primary" colonies are all charter members of the ConFed, and are notably well motivated and stable societies. Inner worlds descended from the secondary colonies, however, are often wildy divergent from this model, and encompass a variety of socio-economic environments. Many of these worlds now sponsor their own colonial efforts.

TYPICAL SOCIO-ECONOMIC SYSTEMS WITHIN THE CONFED

The ConFed Core Worlds

The older central worlds (the primary colonies) tend to operate a socio-economic system which is best described as socialist. The high state of robotic manufacturing has removed the necessity for many tedious labor jobs. The state provides the individual with basic food, medical care and housing, and a minimal allowance for the purchase of consumer goods. When individuals desire additional purchasing power, they will take on some manner of job, but there is no real need to do so, since there is no drive to bring in a wage merely to pay the food bills and rent. Many citizens spend their days as "professional" students or dabblers in art and craft. Core world governments subsidize writers and artists, inventors and actors, giving them an active and innovative culture. Life in the core systems is by no means lazy and boring, as a huge variety of pursuits are readily available to every citizen.

A citizen's status, social responsibility and credit rating will increase as he shows himself to be an enterprising or competent individual. Even with the roboticization of most boring labor tasks, there are a number of jobs which require hands and brains. Professional careers are a necessary and valued part of technical civilization, and the need for soldiers, police, bureaucrats and administrators remains high. In addition, capitalist enterprises are freely entered into by many individuals, often with the aid of government grants, subsidies and franchises. Thus individuals can gain the satisfaction of independence from government "handouts" through taking on a greater responsibility for their own welfare. The central systems enjoy a wide variety of small time operations and individual businesses as citizens strive to improve their quality of life.

The Inner ConFed

The societies which have grown out of the worlds which were settled during the secondary colonization period display a number of widely divergent socio-economic infrastructures. As a rule there is more of a "money drive" in the inner ConFed and outworld systems, many of which lack the technology to support the sophisticated socialist states of the central systems. The socio-economic systems found in the inner ConFed and outworlds cover a wide range of possibilities, including free-for-all capitalism (in the most extreme cases, capitalist worlds will have almost no state-run enterprises, the government often forming a major company which offers a range of standard services with which private enterprise must compete).

The Outworlds

Many systems settled during the tertiary period of colonization are now well established, independent socio-political entities. The outworlds which have reached this stage of development are very much like the worlds of the inner ConFed described above, but tend to have far smaller populations and less comprehensive technological development. The outworlds are notable for their inhabitant's sense of post-colonial independence.

Many outworlds are colonies of other systems. Colonies are now defined as those planets which are dependent upon other worlds for the resources which allow them to survive, or whose populations are low enough to require a constant inflow of trade to supply exotic or consumer items.

The current crop of colonies are all products of the last fifty years of space exploration, and most colonies only exist to exploit a resource or to provide a service valuable enough to warrant the expense of supporting the colony in the first place (although a number of independent colonies exist which lack this resource-oriented mentality). Colonies are often ruled by governors appointed by the colonies' home worlds, although the best developed colonies are self ruled. There are also a number of colonies which are in effect "company towns", where all the inhabitants are employees of the colony's sponsoring company, contracted to a business rather than to a government.

Colonies are always short on consumer goods, but normally support most of their own needs in the realms of essential tools and materials. Where they require support is in the realms of expert personnel, advanced education, specialized machinery and the like. The outworlds and colonies are often havens for folk who lacked opportunity in the inner ConFed, but the low technologies of most outworlds force their populations to labor merely to cover the costs of their food and lodging. The proud independence of outworld citizens is often hard won.

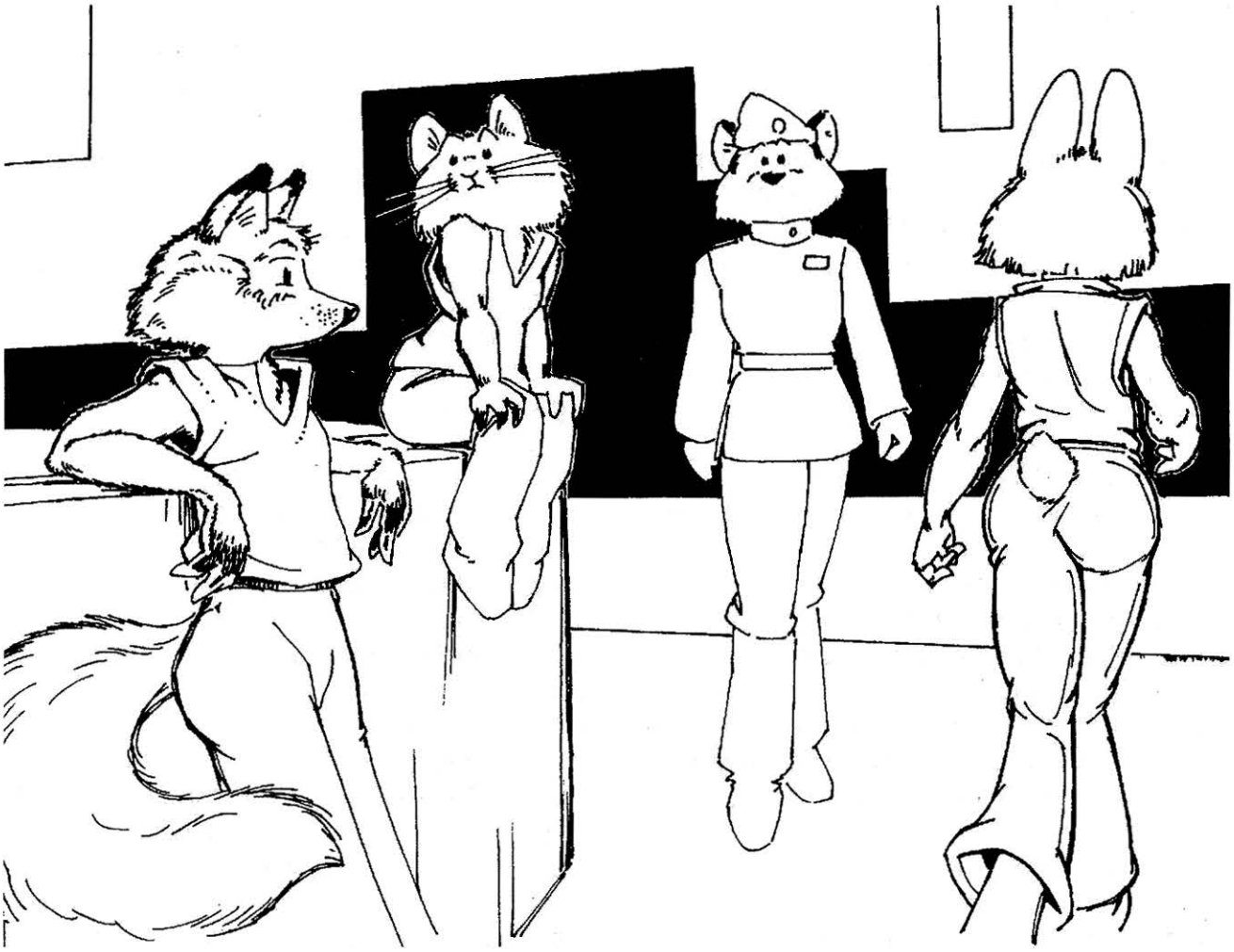
SOCIAL ATTITUDES

In Albedo we find ourselves faced with a very young society–a society which is not encumbered by set traditions.

General

The closest thing to social tradition available to the people of Albedo is shipboard discipline, and this is strongly ingrained in all levels of society. Simply stated, the individual member of society is not quite as "free" (in one sense of the word) as a 20th century western man, because the individual is strongly constrained by a set of expectations and responsibilities. The individual is expected to be an active citizen, and is conceived of as having both civil liberties and responsibilities. The fragile ecological and social environment on board colonization ships has led to the development of societies where the individual is expected to take his social role very seriously, and to contribute to the working of things around him. The individual is expected to behave in an intelligent, responsible manner, and to be aware of the implications of his or her actions. Citizens are expected to be aware of the long running consequences of their actions, and to act accordingly.

Thus in most cultures, if a person is injured, it is the civil duty of passersby to assist that person however possible. If a passerby refuses to aid the injured party, or pretends to ignore him, then the passerby is held to be partly responsible for the subsequent condition of the injured man, and will be charged under law accordingly. Regional attitudes do vary, however. For instance, to the inhabitants of the Dornthant system, the tools of an or-



dered and peaceful society are its security measures, and the cooperation of the common citizen is an expected duty. To a Dornthantii, running away from or obstructing the authorities is a clear admission of guilt.

The practical upshot of the social attitudes prevalent in most cultures in Albedo is the creation of societies which are very politically and ecologically aware. The average citizens feel that they have a vested interest in the running of their government, their society and their planetary environment. Albedo is set in an age of REASON, where forethought and responsibility are highly valued faculties. In the context of the culture of known space, "honor" will usually equate to social responsibility.

Military Traditions

One of the unusual aspects of society in Albedo is that it does not actually HAVE any set military traditions. Organized militarism is a fairly recent development, and thus the troop motivating mechanisms familiar to our own society simply do not exist. Troops are perforce motivated by team spirit, patriotism and respect for their fellow soldiers. The coolly calculated ferocity of the ILR soldiery and the stalwart professionalism of the EDF bear witness to the efficiency of these techniques.

There is no formalized military etiquette. Salutes and other elaborations are all missing from military life. To indicate deference and respect, ranks and titles are used when speaking to one's superiors, and a respectful attitude

is maintained. Other formalized gestures are alien.

The Creator Myth

In recent decades a vague superstition or belief has begun to arise relating to an overall creator of this universe and the life within it. Since the people of known space still have no direct evidence to explain away the creation of technical society on Arras Chanka, the creator myth has taken a good hold on the popular imagination.

The embodiment of this creator is termed "Kaih", but this entity is not viewed as a meddler in the affairs of the universe. The belief in Kaih is not an organized religion, or even a formalized superstition attributing set powers, aims and goals to this deity, although a belief in a negative principle ("Kio") has also appeared. Rather, a belief in a greater power in the universe has come to be simply because people seem to feel the need for it.

Day-to-Day Life

Interstellar society is made up of a huge variety of people who organize their lives in many different ways. We shall make no attempt here to discuss the quality of life of billions of individuals, but instead shall look at a few aspects of life which will add color to the campaign background.

Not all races of creatures live together in relative harmony (as shown by the racist doctrines of the ILR). Races either do or don't get along together according to their temperments. One of the first things that happened after the development of practical interstellar travel was the establishment of species-specific colonies, most of which quickly developed divergent cultures. As a rule, however, divisions between people are seen as differences between culture and nation of birth, and not physical appearance.

Law and surveillance varies greatly from world to world. The older central systems have very highly developed civil surveillance systems (using stationary monitors, mobile security patrols and communications monitoring) which allow security forces to closely monitor the activities of the citizens. While societies such as Dornthant use this system wisely, intending the security monitors only to protect the public without intruding into the citizens' privacy, many outworlds view close monitoring with horror. Indeed, the close monitoring system could easily be used as a tool by police states to spy on their populaces. Many societies feel strongly about overt police presences and security surveillance. As always, no two worlds will be exactly alike.

The environments in which people live are quite varied. Colony worlds are a strange mix of local and imported flora and fauna. Interstellar pine, eucalyptus and grass are present on just about every world, as are the descendants of the familiar lower life forms which were brought to space with the first waves of colonists from Arras Chanka. All inhabited "terrestrial" worlds have comfortably breathable atmospheres, water and some sort of consumer industries–the essentials of technical civilization.

Modes of Personal Address

The polite way of addressing a person whom you respect is with the prefix "Honorable." The normal use of the titles "Mr." and "Ms." are prevalent throughout known space. On planets where actual citizenship is not a privilage enjoyed by the whole population, the title "Citizen" is considered a polite formal mode of address. In the military services, superior officers will be addressed as "Sir" or "Ma'am."

Addressing people can get confusing, as local planetary names may vary from the "of-

ficial" reference. As an example, the star Danet has eight planets; the habitable third one is known as Danet III, and a native would be referred to as a Danetii. However, the natives call their homeworld Charanx, and would address themselves as "(given name) o'Charanx", or as a Charanxer. Other populations may have equally confusing methods, referring to system, planet, or even regional or national affiliations. So, to be safe, using a more generalized formal address is better at the start.

Languages and Communication

The worlds of known space share a common language dubbed "standard." Over the past two centuries, standard has begun to diversify. Under the influence of the sudden divergence of background environments and lifestyles caused by stellar civilization, individual regions and worlds began to develop distinctive modes of pronunciation and local colloquialisms. The older central systems have now developed accents and vernacular modes which are so thick as to be barely recognizable by inhabitants of other systems, although all citizens can usually revert to speaking pure standard at need. Colony worlds usually diverge very little from pure standard, having had little time to develop colloquial forms.

In a campaign, it is best if the umpire tries to develop accents for the denizens of worlds which the player characters frequent. Anything from a southern American drawl to a Germanic pronunciation technique (i.e., the verbs before the prepositions put) can emphasize that the local people are <u>different</u> from the players. Characters from planets with widely divergent accents or cultures will also have more exotic personal names than their more mundane fellows.

All worlds use one standard alphabet, which is phonetically based, unlike our current English alphabet, and is thus quicker to learn and simpler to use. Standard has no vowel combination rules or silent letters. Pronunciation techniques are similar to the non-English European form (i.e., pronounce "W" as "V", as if you were speaking German), and some phonemes are not represented. The grammar and punctuation of standard follows the usual English forms.

One common numerical system is shared by all the cultures of known space. Since our critters are notably equipped with three fingers and a thumb on each hand, the numerical system is in <u>base eight</u>. Decimal values have been used throughout the rules as a convenience to the reader.

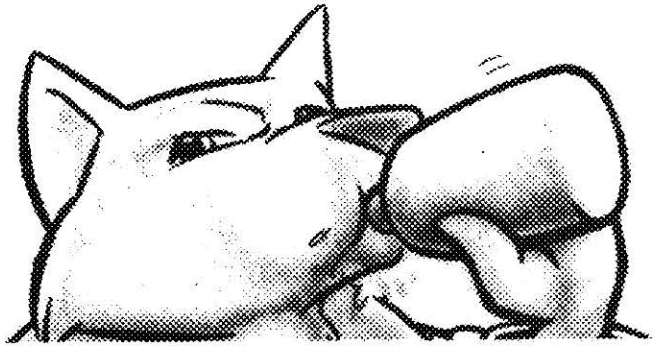
Entertainment

With a fairly young culture, the populace of known space in Albedo does not have recourse to the wealth of leisure activities enjoyed by the reader. Among off-duty EDF personnel standard activities will be role-playing and simulation games, gambling, simple sports/martial arts (team sports tend towards informal games of "tag"), and discussing thoughts for the day. With an embryonic entertainment industry, conversation will occupy much of a character's off hours.

The Albedo skill lists include martial arts. As stated above, martial arts are simple, and lack the formalized postures of karate or ju-jitsu. These martial arts are sports born from combat experience. "Boxing" covers the skill of foot and fist boxing, a free-for-all unarmed combat style which covers all strikes and blows from punches to head butts. "Wrestling" describes a scientific grappling and limb locking art much like judo or ju-jitsu, where opponents are thrown off balance and immobilized. "Stick fighting" is more of a sport than the other arts, and uses a 1m long staff (a padded plastic rod for practice fights) in blows similar to those used in quarter-staff fighting and kendo.

The state encouragement of private entrepreneurial enteprises in the inner ConFed is very strongly present in the consumer goods and entertainment industries. Governments are well aware that the services that they offer are practical, efficient, and dull. They thus encourage the development of new consumer goods and "frivolous" pursuits. A large part of interstellar trade consists of the selling of data, designs and franchises for consumer items.

One major note at this point is that hallucinogenic substances (such as alcoholic beverages) are virtually unknown, and their use as a form of "entertainment" would be totaly ab-



horrent to the people of such a rational age. (Remember the "ship's discipline" influence upon Albedo's culture. Losing control of your faculties aboard a starship is not encouraged.) Perhaps someday alcoholic beverages might develop, but first someone has to invent the concept, and then there has to be sufficient motivation to spread the idea (a very difficult proposition when there is no cultural encouragement).

Remember that the social/sexual behavior of critters is somewhat non-human. For example, some creatures will go through periods of completely gender-neutral social behavior. They might have an exaggerated interest in status-seeking, or in other actions hinting at ancestral instincts. Primate-based sociosexual motivations often have little or nothing to do with their actions.

ENVIRONMENTS

The inhabited worlds of known space fall into two types: those with open environments, and those with artificial environments.

Artificial Environments

Many communities exist in controlled artificial environments, either on planets with hostile atmospheres, in zero-G communities, or on spun structures. Such establishments will only exist where there is enough profit to be made on site to cover the expense, inconvenience and discomfort of living in such restricted circumstances. Communities which utilize artificial environments will rely heavily upon imports for the provision of specialized equipment and consumer goods, and are often tied to a parent company or home planet. Most well developed systems will have starports or shipyards, research stations, or zero-G factories in their Clarke orbit.

Systems which are inhabited only by populations living in structures or protected environments might have just about any sort of stellar primary or physical configuration. The populations of hostile environment worlds are usually non-permanent, being rotated offworld at regular intervals. The gravity on hostile environment worlds will vary between almost nonexistent and downright oppressive. Worlds which have gravity high enough to be a serious health risk to living beings will normally be worked by robots.

Open Environments

Open environments are those planets whose atmosphere, water and bio-system will support critter life without recourse to special artificial aids. All terrestrial worlds will tend to have gravity of about 1G, and will probable have stars in the F-G-K range. The self sustaining colonies/homeworlds of known space are established on worlds with oxygen/nitrogen atmospheres, usable water, and a lack of advanced life forms. The immediately explored region of space has an abundance of such worlds, all of which conspicuously lack advanced life forms (i.e., higher up the evolutionary scale than simple plants and arthropods). Most worlds are well stocked with flora and supportive fauna taken from the original stocks found on Arras Chanka.

It is not known whether the abundance of usable worlds is the normal state of affairs for the universe as a whole, or if it is simply some quirk of the local region of space.

TECHNOLOGY

The technical society so mysteriously established on the planet Arras Chanka had a wide array of sophisticated technologies at its disposal: room temperature super conductors, fusion power, artificial intelligence technology, robotics, robotic manufacturing and bio-mass production (a means of synthetic food production) to name but a few. The question of the origin of civilization some 200 years ago prompted the swift development of space travel based on fusion drives. In the wake of the discovery of the jump drive and the first period of interstellar colonization, many technologies were refined and developed. At the time our game begins, most technologies have "plateaued out", and no new developments have been discovered for some decades.

AEROSPACE TECHNOLOGY

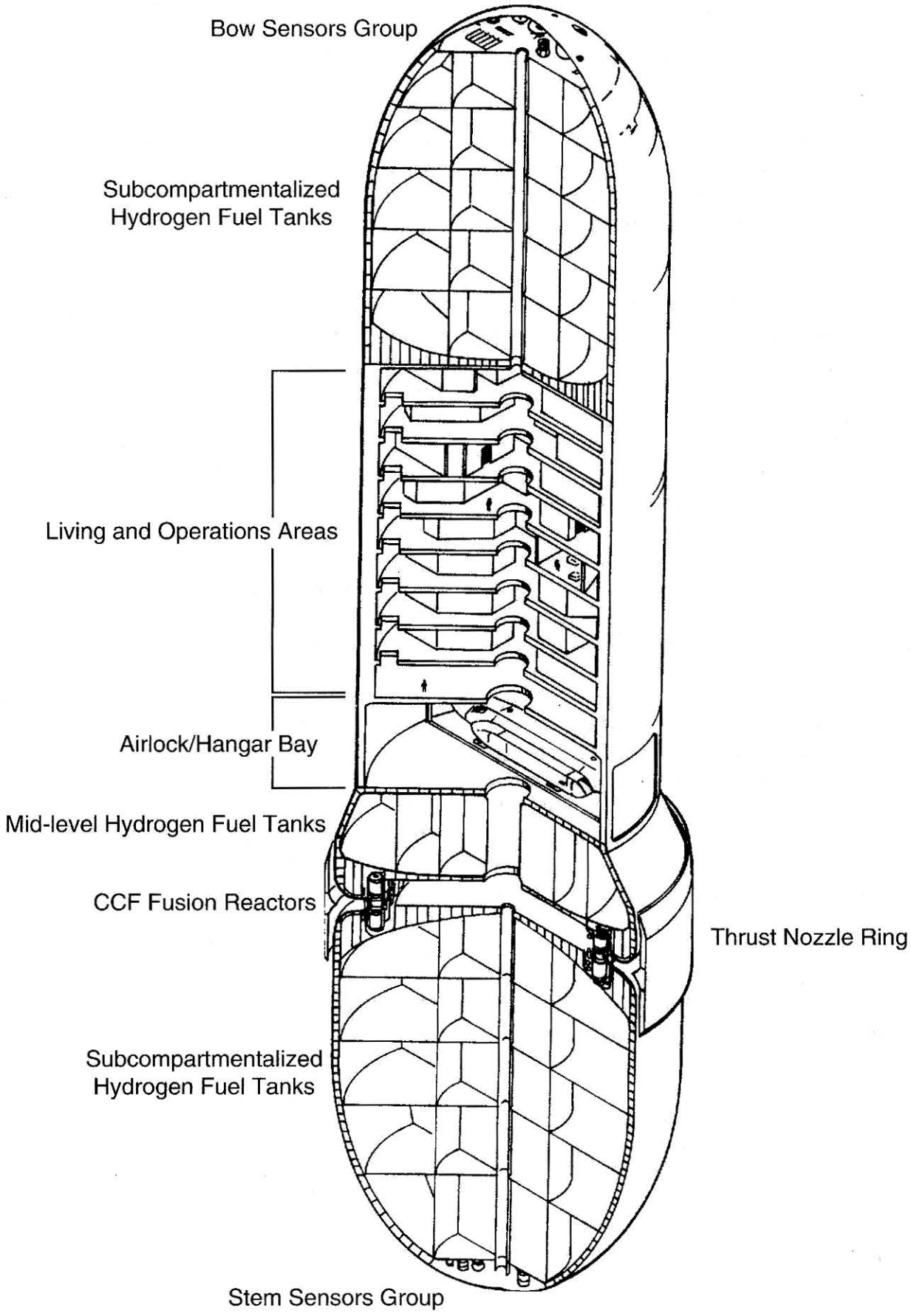
Space craft in Albedo are divided into two separate types: aerodynes and starships. Aerodynes are fusion-powered semi-lifting bodies which may operate in either space environments (using a fusion-powered reaction drive) or within a planetary atmosphere (using fusion-powered jets). Aerodynes are VERTOL capable, highly maneuverable craft which are by far the most common civil and military aerospace vehicles. In a military role, aerodyne gunships and assault craft perform functions similar to 20th century fighters, helicopters and transport aircraft (just cheaper, faster and more efficiently). Long endurance aerodynes equipped with multiple reactors and jump drives serve as light freighters, scout craft and couriers. Aerodynes range between the size of a minibus to a maximum of 8000 tons mass.

True starships start at about 10,000 tons of mass and are not designed to enter planetary atmospheres. Destroyer-sized military craft might bulk as much as 50,000 to 100,000 tons, and VLCC's can be many times bigger (up to a maximum of 5km long by 1km wide!). All starships are built along very similar lines–a blunt-ended cylinder with a fusion drive at one end. Fuel tanks are placed to the fore and aft, as shielding around the reactors and as an additional layer of armor under the vehicle's skin. Military vehicles will have densely packed layers of monomolecular laminate armor and a high payload of missiles and drones. Decks are oriented with the "down" direction towards the engines.

Starship combats vary depending upon the relative speeds of the combatants. In engagements with high relative velocities, ship beam weapons cannot cause much damage, since they have very little time to chew their way through a target's layers of ablative skin, armor, fuel and bulkheads. In such cases, the best weapons are drones and missiles, and the high relative velocities can often make warheads superfluous.

Starships form a defensive/offensive perimeter about themselves with ACV's, "smart" missiles that can not only track and attack a target, but plot their own tactics and strategy as independent weapons or in concert with other ACV's and the mother ship. ACV's have a comprehensive array of communications equipment and sensors, and thus serve as intelligence ferrets and command relays. ACV's are based upon the jump-capable message torpedoes used for interstellar communications, but lack the jump drives of such systems. Capable of acceleration spurts of up to 50 G's, ACV's come with a variety of add-on features such as beam generators, automatic cannon, and submunitions. While normally unarmored, the computer core and reactor packages can be buried in layers of armored protection over a meter thick. This block (usually accompanied by a spray of multition iron

Typical Small FTL Scout Starship



slugs) makes up most of the impact mass for ramming attacks and bombardments.

The reaction times for these kind of ship-to-ship actions are in orders of magnitude too fast for a ship's organic masters to follow, and thus are handled by a group of disconcertingly intelligent computers. A ship's artificial intelligence (AI) computers require their live crews for maintenance, back-up, and creative tactics plotting in the days of approach before a combat begins.

In Albedo, ships travel at transluminary velocities through the use of a "jump drive", which is only operable well outside of a star system's gravity well (10 to 40 astronomical units [AU's] out from the system's center of mass). This distance could take two weeks to two months to traverse, depending on the economics of speed and distance (especially in comparing a heavy freighter with a tight fuel budget versus a "hell for leather" military craft).

A ship's build up of energy before a jump is highly dependent upon the vessel's acceleration. The fusion reactor "jet" is fed through MHD coils before becoming exhaust thrust, and the energy thus generated is stored until enough is available to form a jump field (via the ship's jump field generators, which line the vessel's inner hull).

With the jump field formed, the ship drops out of the relativistic universe, reappearing at another point in the universe with no loss of time or velocity. Ships must jump from far outside of a gravity well, and the destination must be the next gravity well in line of flight. Ships which jump while too close to a gravity well will have only a proportion of their mass "go over" (starting with the lighter elements). To an observer, the ship will seem to blow up, smearing itself across a wide area.

As a final note on aerospace technology, please remember that there are no antigravity or artificial gravity/anti-acceleration technologies. Ships move at velocities which their living crew can handle, and ships are designed with free fall movement and acceleration orientation in mind.

BIO-SCIENCES

The high state of medical technology now means that very few patients will succumb to their injuries if they can be brought to hospitalized care. Robotic patient support now leaves a higher percentage of hospital staff free to indulge in specialist fields, removing the doctor/nurse distinction of the hospitals of 20th century Earth. Limb grafting techniques, artificial blood, synthetic organs (often grown from tissue samples taken from the patient) and effective cancer therapy are taken for granted among high technology society. Patients who are drastically wounded can be put into almost a suspended animation until they can be brought to a proper medical facility, although this is a dangerous process.

COMPUTERS

Computer technology is a very common part of day-to-day life in Albedo. Every well equipped household has its home computer, and more extensive data processing is available through any citizen's telephone account. Computers are fairly specialized in function, but the high state of communications technology allows computers to call in specialized functions from other machines with ease. Most computers are voice responsive.

Computers form the major means of distributing consumer information. Electronic mail (usually verbally dictated to the computer) and electronic billboards allow a high rate of information exchange between private citizens. Civil news and debate nets have now replaced the daily newspaper as the standard means of

disseminating current events to the masses, and TV news supplements its presentation with continually modified printed texts. These texts are readily cross referenced with "newspaper" archives, greatly increasing the average citizen's current affairs literacy.

AI's are a highly developed, underused technology in the Albedo universe. When combined with a large data base, AI's are sophisticated and flexible systems capable of independent thought. AI's are invaluable aids in the running of starships and research projects, since they can both collate and evaluate data at rates far exceeding that of organic life. However, AI's are expensive little toys, and do not intrude much into the day-to-day life of most citizens. Most aerodynes or combat AFV's will have an AI as part of the crew.

Robotic technology is commonplace in the Albedo universe. On the most highly developed worlds, robotic manufacturing centers produce most of society's basic material needs, eliminating most tedious manual labor tasks. At the current state of the art, robots are used for a great many functions which do not require flexibility of evaluative judgment. Common robots include bartender, cleaning and maintenance robots which are free-moving, thinking artifacts in their own right. Robots are capable of limited and strictly defined functions, and are usually linked into proper AI's when a high level of response and evaluation is required for the robot's task.

ENERGY

Fusion power plants are the most common means of power generation in use by Albedo's technical society. Fusion power is clean, cheap and safe, although the shielding on generators tends to become radioactive as time goes by. The weight of the shielding necessary and the minimum size limits for the fusion initiation beams and even chamber, etc. prevents the development of any fusion power plants of a

size usable in small ground vehicles and personal weaponry.

MISCELLANEOUS TECHNOLOGIES

Materials technology has progressed somewhat from that which would be familiar to the 20th century observer. Ceramics have largely replaced metals in all but a few areas. Buildings, sidewalks and cars in Albedo are mostly constructed of laminated ceramics, plastics and artificial materials.

Another development in the realms of materials science is monomolecular lamination. Monomolecular lamination technologies allow for single sheets of dissimilar atoms to be layered on top of each other to form a composite material. Monomolecular laminates achieve truly incredible materials performances, and are commonly used as vehicle armor, structural supports and power plant shielding. The use of monomolecular laminate vehicle armor renders AFV's immune to infantry portable weapon systems and chemical energy weapons.

Personal weapons all rely upon kinetic energy principles–there are no blasters, phasers or laser pistols in Albedo. Up until the ILR split, everyone had very similar weapons and calibers, and there was a fair amount of standardization. Since the split, the ILR and the EDF have pursued mutually incompatible systems. The EDF use conventional cartridged ammunition in 8mm caliber, in pistol, carbine and rifle sizes (although 6mm and 4mm caliber weapons are available for use by some of the smaller beasties). Armor-piercing rounds are sub-caliber saboted darts. The ILR has chosen a 6mm caseless system, which has less individual stopping power, but which is considerably more compact than 8mm rounds. Ballistic body armors are not immune to infantry firearms, but do manage to greatly improve the chances of surviving a hit.

Energy weapons see some success as spatial weapons systems. They have not proven viable weapons for ground vehicles due to the need for a beam to play across the target for some time before doing real damage. Aerodyne beam weapons are, however, commonly used to suppress ground forces. Standard ship beam weapons include lasers (pulsed for explosive heating impact) and electron and proton beams. X-ray laser technology is not being pursued at this time.

"Bio mass", which forms a large part of the basic diet of the various "carnivorous" species, also deserves a brief description. Basic bio mass is a composite organism (algae and bacteria) which contains a good cross-section of proteins and carbohydrates. A number of variations on basic bio mass ("fancy food") exist, each with its own distinctive flavors and textures.

CULTURAL NOTE

The above sections of background material detail the basis of the Albedo scenario's culture. Always remember that the action in this game does not take place on Earth, and the inhabitants of the Albedo universe are not just people in funny animal suits. The attitudes and motivations of the folk of known space are alien when seen from the viewpoint of a 20th century western human.

Try to examine their attitudes and conventions in the light of their own culture, rather than through the culturally bound eyes of a member of a society which boasts 5000 years of recorded history and accumulated social impedimenta.

STAR SYSTEMS

During two hundred years of interstellar space flight, there has been a great deal of cultural divergence among the secondary and tertiary colony worlds. No two planets are exactly alike, and each new world should have its own distinct *feel*.

When running a scenario, umpires should present the social environment as clearly and colorfully as possible. By emphasizing the cultural differences between the player characters and each new world, the scenarios become more involving and encourage better role-playing. A character's native culture will effect the character's psychology, since his own world's mind set will define what he conceives of as being "normal." Players should be encouraged to develop a background culture for their characters.

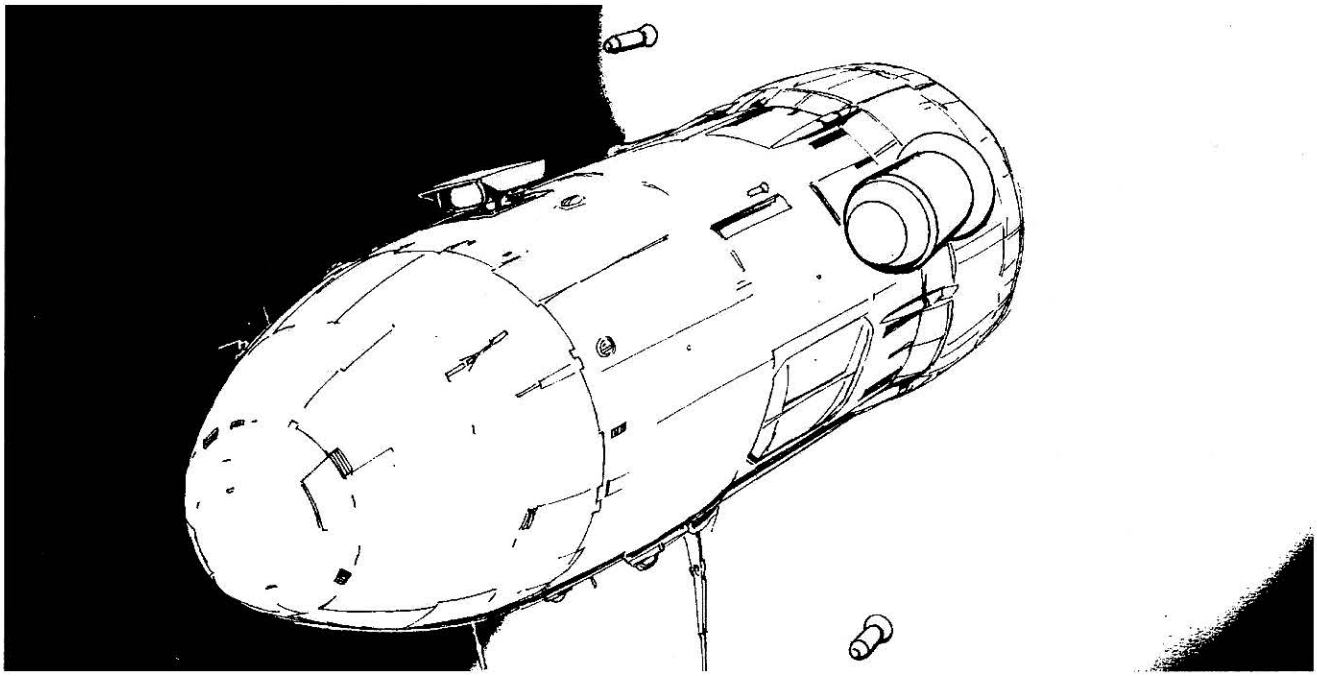
WORLD GENERATION

The cultural notation system determines the culture and mind set of the people who live in the system's major habitat. There may be many other settlements within the system, but the attitudes of the inhabitants will vary little from that of the people from the main population center.

The cultural notation system uses hexidecimal numbers. The number 10 is expressed as the letter "A", 11 is expressed as "B", etc., all the way up to the letter "F" (15). To randomly generate a culture, simply roll dice to determine the culture's ratings in each category.

There are sixteen different cultural categories. All tables for rolling up the different cultural characteristics are given first. The page number where the explanation of the results can be found is given with each table.

Although the random tables fill out the basic details of a system's culture, it is up to the umpire to read the information provided, understand it, and make the culture come to life for the players. The umpire should create a "potted history" for the world which will explain why the planet developed the way that it did.



Environment: 1d8 (page 130)

1 Zero-G structures
2 Hostile environment
3 Simple ecology, restricted outpost
4 Simple ecology, limited development
5 Simple ecology, extensive development
6 Complex ecology, restricted outpost
7 Complex ecology, limited development
8 Complex ecology, extensive development

Population: 1d12 (page 132)

+1 to roll for secondary colonies; +3 for inner ConFed and ILR worlds.

1	Tens to hundreds
2	Thousands
3	10,000-50,000
4	60,000-100,000
5	101,000-400,000
6	500,000-900,000
7	1 million
8	2-3 million
9	4-5 million
A	6-10 million
B	11-20 million
C	21-50 million
D	51-200 million
E	201-400 million
F	500 million+

Manufacturing Capability: 1d4 (page 132)
(**2d2** if population is 1 million+)

1 Limited manufacturing capacity
2 Developing manufacturing capacity
3 Advanced manufacturing capacity
4 Mature manufacturing capacity

Gov't Control of Citizens: 1d6 (page 133)

1 Total domination
2 Rigid regimentation
3 Comprehensive control
4-5 Minimal interference
6 No governmental interference

Popular Participation in Government: 1d12 (page 134)

1 Restrictive democracy, closed franchise
2 Restrictive democracy, open franchise
3 Representative democracy, closed franchise
4 Representative democracy, open franchise
5 Decentralized democracy, closed franchise
6 Decentralized democracy, open franchise
7 Partial participatory democracy, closed franchise
8 Partial participatory democracy, open franchise
9 Full participatory democracy, closed franchise
A Anarcho-syndicalist
B Partial autocracy
C Total autocracy

Control of Products and Services: 1d10 (page 137)

1 Total state control
2 Extensive state control (limited collective ownership)
3 Extensive state control (limited private ownership)
4 Partial state control (collectivized industrial control)
5 Partial state control (private industrial control)
6 Limited state control (collectivized industrial control)
7 Limited state control (private industrial control)
8 Collectivized control
9-A Private control

Ownership of Goods and Capital: 1d3 (page 138)

1 Private ownership
2 State supported
3 Total state ownership

Distribution of Goods and Services (page 138)

This is based on the Ownership of Goods and Capital rating. Roll 1d3. On a roll of 1, add one to the rating; 2, no change; 3, subtract 1.

0-1 Little or no access
2 Limited access
3-4 Substantial access

Individual Access to Information: 1d6 (page 139)

1 Virtually none
2 Restricted (state-controlled media)
3 Restricted (private media)
4 Free access (state-controlled media)
5-6 Free access (private media)

Population Morale Factor: 1d6 (page 140)

Roll 1d6 and average the result with the Government Control of Citizens and Individual Access to Information scores. Add 3 if the culture is a participatory democracy of some kind.

1 Discontent
2 No interest
3-4 Little interest
5 Active interest
6+ Enthusiastic interest

Species Range: 1d10 (page 145)

1-8 Non-specific
9 Species-specific
A Species group-specific

Security Attitude: 1d6 (page 141)
(**1d4** for tertiary colonies)

1 Strongly anti-security
2 Anti-security
3 Privacy conscious
4 Security conscious
5 Pro-security
6 Strongly pro-security

Clothing Attitude: 1d6 (page 141)

1 No nudity taboo
2 Limited nudity
3-4 Nudity taboo
5 Well dressed
6 Complex clothing codes

Family Life: 1d6 (page 142)

1 Single parent orientation
2 Nuclear family
3 Limited group family
4 Extended family
5 Extended group family
6 Clan organization

Sexism: 1d10 (page 144)

1 Segregated society
2 Overprotective
3 Protective
4-6 Deferential
7-A Equal society

Accent: 1d6 (page 145)

1-2 Pure standard
3-4 Localized slang
5 Picturesque accent
6 Heavy accent

ENVIRONMENT

The following list of environments is far from exhaustive, and umpires should feel free to fill in details and quirks. Even so, a few premises should always be held in mind. All well established settlements will be largely self-sufficient as far as food and air are concerned. There will be no permanent settlements in high gravity environments, since these regions will be exploited via robots. Also, remember that areas will always be inhabited for a *reason.* People would not normally be prepared to live under difficult or dangerous circumstances unless it somehow profits them to do so.

1. Zero-G Structures

The inhabited environment consists of a number of free floating artificial structures in high orbit (usually referring to a Clarke, or geostationary, orbit, as applicable) about a planet or moon, or among asteroids. For health reasons, all inhabitants will have access to spun or accelerated conditions, which will allow them to regularly experience weight.

All inhabitants of artificial environments will be very conscious of the individual's responsibility to the environment. Locals will not be tolerant of wasted resources, pollution and dangerous behavior. Disaster is always waiting to claim the irresponsible.

If settlements are well distanced from one another, the local citizens will be well used to communications that involve time lags. They will probably tend to talk and think in terms of full messages, rather than interactive dialogues. This might show itself in normal conversation!

The locals will all have Zero-G Movement as one of their basic movement and perception skills, and will lack skills in areas such as Ground Vehicle Driver and other open terrain skills. Locals will have vacc suit storage discipline, emergency depressurization procedures, etc., drilled into them as part of their basic nature.

Inhabitants will have Antipathy level 2 with *wasted resources* and with *irresponsible behavior.* Weight the roll for the system's attitude concerning *monitoring* towards the high end of the scale. Population will always be rolled on 1d4.

2. Hostile Environment

The local settlements are artificial environments maintained on a world with an atmosphere which is somehow poisonous or unbreathable without mechanical aids. This can include worlds which have anaerobic ecologies which might one day result in the world developing breathable air. Some worlds are deliberately seeded in this way in an attempt at "terraforming" the planet. Other possibilities might include an otherwise habitable world that harbors a lethal or dangerous local virus or allergy. Hostile environment colonies must have good reason for existence–the people who live under such conditions must find it necessary or profitable in some way, otherwise they would move to more agreeable locations.

Attitudes and antipathies for locals will be similar to those of people from zero-G environments. The population will tend to be very conservative. There will be small tolerance for divergent or unusual behavior. Large Ground Vehicle Driver could be substituted for Small Ground Vehicle Driver in the character's basic skills. The locals will have vacc suit storage discipline, emergency hull rupture procedures, etc., drilled into them from an early age.

Inhabitants will have Antipathy level 2 with *wasted resources* and with *irresponsible behavior.* Weight the roll for the system's attitude

towards *monitoring* towards the high end. Roll only 1d4 for population.

3. Simple Ecology, Restricted Outpost

A habitable world in which the native biota has made little or no progress on land yet. Life could be as primitive as a sea full of aerobic microorganisms and a land of sterile rocks, or as advanced as sophisticated marine macrofauna, including mollusks, arthropods, or maybe even vertebrates. Nothing more than first generation vascular plants and maybe some pioneer arthropods will have invaded the land.

Because of limited ecologies or other factors, such a planet might be regarded as too fragile or difficult to develop. A restricted outpost would be an installation with virtually no impact on the environment. It would not be intended for colonization of any real size.

Inhabitants of such worlds will have an Antipathy of 1 against *ecological destruction and pollution*, and may have behavioral quirks related to the isolation if not well monitored. Roll only 1d4 for population.

4. Simple Ecology, Limited Development

As with 3, a livable world, but with limited biota, especially on land. There is active but restrained development to support a long-term colonial population. For example, non-native soil-creating organisms and the plants to grow in the soil are introduced to controlled plots, carefully designed to minimize the impact on the local ecology. The local population is well educated in their individual responsibilities to the local environment, and there is an emphasis on limiting any impact on the broader planetary biota.

Inhabitants of such worlds will have a Tie of 1 with *ecological responsibility.*

5. Simple Ecology, Extensive Development

A habitable world that originally had a simple local ecology, but the decision has been made to actively impose more advanced forms to supplement or replace it. The native ecology is now being overrun by imported life forms in an effort to modify the planet into a more hospitable or exploitable environment. The extent of this displacement will vary according to the age, size, and mission of the settlement.

6. Complex Ecology, Restricted Outpost

A habitable world, and chock full of life on land as well as in the sea, in contrast to the simpler life mentioned in 3. Terrestrial life as advanced as sophisticated insects and tree-size plants make for ecologies as rich and diverse as those in the sea. However, for one reason or another, no real development has taken place and only limited, non-impacting installations are on the planet.

Inhabitants of such worlds will have an Antipathy of 1 against *ecological destruction and pollution*, and may have behavioral quirks related to isolation if not well monitored. Roll only 1d4 for population.

7. Complex Ecology, Limited Development

As with 6, a habitable world with ecologies rich in complex and specialized animals and plants. Settled areas will have a minimum of non-native life brought in, carefully designed to minimize impact on the local ecology. The local population is well educated in their individual responsibilities to the environment.

Inhabitants of this sort of world are used to complex ecologies and will be naturally cautious about sticking their fingers under bark or prodding strange insects. Inhabitants will have a Tie of 1 with *ecological responsibility.*

8. Complex Ecology, Extensive Development

A habitable world with a highly, developed, complex ecosystem. As with 6, plant and animal life exists in a profusion of specialized forms. However, non-native forms have been introduced into the native environment to modify the bio-systems into something more hospitable or profitable. The extent of the modification will vary according to the age, size, and mission of the colony.

POPULATION SIZE

Populations vary widely all across the worlds of known space. The largest populations will be on worlds that were secondary colonies. The lower population worlds might be new settlements, or have a limited population due to available resources, mission or environmental factors.

Social mechanisms tend to be more hidebound in small communities than in larger ones. Small, isolated communities tend to have small tolerance for out of place behavior, and tend to be well aware of strangers in their midst. Large populations tend to offer individuals a higher degree of anonymity and thus more social freedom.

Communities of 100,000 or less will generally have access to a limited variety of resources. Older communities will have established extensive home industries and crafts. Communities of this size will also be relatively free from crime.

Populations of a million or more are becoming complex societies. There will be a high degree of political diversification (special interest groups and such), and a wide variety of political issues will constantly arise. This diversity becomes even more pronounced as the population rises. Very heavily populated worlds will have a number of administrative zones which will establish their own political and social climates. These zones will often compete with one another economically and politically.

Strong feelings of planetary independence and identity will probably rise once the population reaches about one million inhabitants.

MANUFACTURING CAPABILITY

Computer-aided design and manufacturing techniques (currently termed CAD/CAM) are normally available to even the smallest workshops throughout known space. With Albedo's CAD/CAM system, goods are designed on computer, and can be produced with computer-controlled machine tools and robotic production lines. Access to the latest software will allow even small workshops to design complicated items. Even quite small outposts can cover most of their own basic hardware needs if given the necessary raw stock materials.

1. Limited Manufacturing Capacity

Small volume goods manufacture requiring outside provision of stock materials. The chemical industry is non-existent.

A limited manufacturing base would be able to handle most straightforward machining, casting and forming of small to moderate sized items made from common materials (common metals, some castable plastics and simple fiber composites). Such facilities would need to import their basic stock materials, and might be in the process of developing their own local sources though mining or smelting chemicals.

2. Developing Manufacturing Capacity

Limited volume goods manufacture. Raw materials are locally produced. There is a basic chemical industry.

A developing manufacturing base provides its own raw materials as well as creating finished products. Most such worlds will not be able to produce super alloys and monomolecular laminates, nor are there the chemicals necessary to create many fancy specialized materials. Complex and exotic hardware cannot yet be locally produced due to materials and fabrication requirements (e.g., items such as high tech turbines are too difficult to produce, and would tie up a specialized assembly line). On the other hand, specialized high tech manufacture of specific items might be established if there is sufficient local demand (probably at the expense of other products and processes). The manufacturing industry is largely driven by local needs and ambitions rather than by absolute capability.

3. Advanced Manufacturing Capacity

Large volume manufacture of most goods and chemicals. Advanced construction materials are readily available. The creation of specialized or exotic goods diverts normal production capacity away from other tasks.

An advanced manufacturing capacity is able to build just about anything if there is sufficient local demand, but may not yet produce full ranges in all areas. The creation of special products will usually be done by converting facilities to run off the needed items before reconfiguring back to their normal function (but only if it is economical to produce the special run). Once again, industry will be governed by local demands rather than by its absolute capability.

4. Mature Manufacturing Capacity

All manner of goods and chemicals are locally manufactured. Specialized production facilities are readily on hand, and there are few problems with quickly creating all manner of fancy hardware.

GOVERNMENT CONTROL OF CITIZENS

This determines the amount of control that the government exercises over the lives of the population. Put the "control factor" in context with other cultural details. For instance, a clan society with heavy government control might have the clan dictating the lives of its members.

1. Total Domination

The government exercises total control over the population. The citizenry is entirely controlled by government law and edict from cradle to grave. Individual choice is almost entirely restricted by government controls (e.g., the citizens will not be able to choose their professions, places of residence or even spouses without clearance and guidance from government channels).

There is almost no protection of the individual's rights from government interference. The needs of the individual must bow before the needs of society.

2. Rigid Regimentaion

The government controls most aspects of individual life, regulating and controlling the actions of the citizenry. Individual freedom of choice will normally bow before governmental restrictions (e.g., citizens will not be free to simply set up businesses, or enter into education or training courses, without proper clearance).

Individual rights are given only minimal legal protection against the government. The needs of the individual must bow before the needs of society.

3. Comprehensive Control

Government regulations and guidelines affect many aspects of individual freedom of choice. Citizens are largely free to do as they please as long as they keep within firmly

established boundaries of legal restrictions. The needs of the individual must sometimes bow before the needs of society.

The average citizen believes that the welfare of the group is an important part of securing the welfare of each individual. The minor freedoms of the individual must often bow before the needs of the group, although individual rights and freedoms are well catered for. Laws, rules and regulations are seen as the tools by which society orders itself, and are valued and respected.

Locals will have a Tie of 2 towards *social order.*

4-5. Minimal Interference

The government is empowered to make considerable restrictions on the citizens if this proves necessary (e.g., for public safety), but this will not interfere with the lives of law-abiding citizens. The government will provide help and guidance to the citizenry, but this is entirely at the citizen's option.

The average citizen believes that the welfare of the group is an important part of securing the welfare of each individual. The minor freedoms of the individual must often bow before the needs of the group, although individual rights and freedoms are well cared for. Laws, rules and regulations are seen as the tools by which society orders itself, and are valued and respected.

6. No governmental Interfernce

The government has no real powers to impose upon the freedom of choice of individual citizens. The government will provide aid or advice to citizens on request, but otherwise seeks to intrude into private life as little as possible. Citizens may act pretty much as they please, bounded by necessary laws for public safety.

Social bonds emphasize consideration for other citizens rather than loyalty to an impersonal government. People are keenly aware of how their actions affect the rights of other individuals, rather than how their actions affect society as a whole.

Locals will have an Antipathy of 1 with the concept of *government control of citizens.*

POPULAR PARTICIPATION IN GOVERNMENT

The way in which citizens participate in the process of government will vary widely from world to world. The following section describes the degree to which a world's population influences and participates in governmental decisions, and to what extent the populace influences the transfer of power.

In a *closed franchise,* the vote is granted only to a portion of the population. This might be determined by any nunber of means:

• Social service. The vote is earned by voluntary performance of social service work, and by military service. Citizens who have worked for the government administration, the Homeguard, EDF, emergency services, or who have volunteered for part-time social support organizations will all be eligible for the vote.

• Education. The vote is granted to citizens who can demonstrate a reasonable grasp of current events and political knowledge. Citizens would sit for an exam which would earn them their right to vote. Other planets might restrict the vote to persons who meet set SPI rating requirements.

• Bigotry. The vote is restricted to persons of a certain status, income bracket, race, sex or family ancestry.

In an *open franchise,* the vote is freely granted to *all* citizens.

1. Restrictive Democracy, Closed Franchise

The voting public elects a legislative government from a limited selection of candidates. There will normally not be a multi-party system. The vote is simply used to approve appointments within the single party structure.

Eligibility for candidature is restricted to approved government criteria (such as long running service to a political party). Candidates will therefore follow set party political philosophies, although they may differ from the mainstream in ideas about specific policies or implementation. There is little allowance for pandering to divergent political beliefs.

This system could become quite nasty and insular (for example, the vote might be restricted to persons who have joined the sole ruling party, and who have been educated in its particular political dogma).

2. Restrictive Democracy, Open Franchise

The public elects a legislative government from a limited selection of candidates. There will normally not be a multi-party system. The vote is simply used to approve appointments within the single party structure.

Eligibility for candidature is restricted to approved government criteria (such as long running service to a political party). Candidates will therefore follow set party political philosophies, although they may differ from the mainstream in ideas about specific policies or implementation. There is little allowance for pandering to divergent political beliefs.

3. Representative Democracy, Closed Franchise

The voting population elects a legislative body via democratic vote. This elective government handles all legislation and policy decisions without direct input from the population until its tenure is ended. Governments might be forced out of office if their decisions are extremely unpopular.

4. Representative Democracy, Open Franchise

The population elects a legislative body via democratic vote. The government then determines all legislation and policy decisions without direct input from the population. Governments might be forced out of office before their official tenure is over if their decisions are extremely unpopular.

5. Decentralized Democracy, Closed Franchise

The voting population elects a legislative body via democratic vote. The elective government handles all legislation and major policy decisions without direct input from the population, except in the area of local governments.

Each inhabited region is split into administrative areas. Each administative area governs its own local affairs through plebiscites, which create policies which will be implemented by elected local officials. Although the plebiscites cannot affect the general policy decisions of the central government, voters have the opportunity to become directly involved in local government decisions if they so wish.

6. Decentralized Democracy, Open Franchise

The population elects a legislative body via democratic vote. The elective government handles all legislation and major policy decisions without direct input from the population, except in the area of local governments.

Each inhabited region is split into administrative areas. Each administative area gov-

erns its own local affairs through plebiscites, which create policies which will be implemented by elected local officials. Although the plebiscites cannot affect the general policy decisions of the central government, citizens have the opportunity to become directly involved in local government decisions if they so wish.

7. Partial Participatory Democracy, Closed Franchise

A democratic system which does not pass complete legislative control over to elected officials. An elected government *proposes* legislature and policy, but the implementation of those policies is decided by the voters. Votes are usually recorded by home terminals and portable computer. Electronic bulletin boards and public debate nets keep voters aware of up and coming decisions and current political issues.

8. Participatory Democracy, Open Franchise

A democratic system which uses elected government officials, but which allows the opinions of voters to directly influence the working of the government. The government proposes legislature and policy, but the implementation of those policies is decided by the voters. Bulletin boards keep voters aware of up and coming decisions and current issues.

9. Full Participatory Democracy, Closed Franchise

This system takes participatory democracy a step further, using household and portable computers to keep voters abreast of political issues, and to record votes and opinions ("electric plebiscite").

All legislation and policy are proposed by the voting public and are implemented or discarded by popular vote. Elected officials will administrate the legislative proposal system and coordinate voting schedules. Current affairs and debate and essay networks will be an important part of local political life. The opinions of every person eligible to vote have a very real effect upon how their world is run.

A. Anarcho-syndicalist

There is no centralized government as such. Individuals collect together into small communes which govern themselves through plebiscite. Where their affairs will bring them into contact with other communes, they will meet and discuss the matter with those concerned.

To make this process easier, areas tend to have regional problem solving and arbitration committees. These groups contain representatives of local syndicates, and they act to mediate between conflicting communal interests. Each commune also contributes funds or personnel to the local committees, who utilize these assets for general public works.

Major foreign policy considerations will be solved by popular vote, but otherwise there is no question of centralized authority imposing on the wishes of the individual.

B. Partial Autocracy

All governmental decisions are in the hands of a limited group of individuals (or even a single individual). The population has no control over the choice of members within the ruling body.

The population does have some small say in the local government. Democratic vote is used to elect officials who administer the government. Although the elected government is usually left to its own devices, the autocratic powers have ultimate right of veto on all decisions made by the elected officials. Elected officials never make decisions about plan-

etary foreign policy. This is controlled by the autocrats.

C. Totalitarian Autocracy

All governmental decisions are in the hands of a limited group of individuals (or even a single individual). The population has no say whatsoever in the decisions made by the government, nor do the populace help to determine the members of the autocracy.

CONTROL OF PRODUCTION OF GOODS AND SERVICES

This factor is used to determine who controls the means of production: the state, private citizens, or a combination of both.

As a brief note, "cooperative" or "collective" ventures are group-effort ventures where profits are shared out between the workers, each receiving benefits according to his contribution to the overall effort. "Private" enterprises are owned by an individual or corporation which reaps the profits from the business venture. Workers are paid a set wage that normally fails to reflect the changing fortunes of the business.

1. Total State Control

The state holds complete control over the means of production, dictating all matters of who receives supply, what items are produced and quantity of manufacture. Citizens who wish to have goods produced will have to petition for access to state facilities. Working citizens will all work for the state.

2. Extensive State Control (limited collective ownership)

The state controls most manufacturing facilities, dictating the type and quantity of goods produced from state facilities (although individuals may petition for access to state-run facilities).

The state allows collective entrepreneurial ventures. Citizens are permitted (or even encouraged) to set up their own businesses, where profits are shared out to the contributing workers on a shares basis. The system is carefully designed to prevent some citizens from becoming wealthy by simply owning the business and reaping profit from the work provided by paid employees. A number of small facilities are owned and run by collective "co-ops" of private citizens in competition with (or complementary to) the state economy, often providing the exotic or small run goods and services which the state machinery seldom handles.

3. Extensive State Control (limited private ownership)

The state controls most manufacturing facilities, dictating the type and quantity of goods produced from state facilities (although individuals may petition for access to state-run facilities).

The state allows selected individuals to enter into entrepreneurial ventures for their own profit. There are a number of small facilities which are owned and run by private citizens in competition with (or complementary to) the state economy, often providing the exotic or small run goods and services which the state machinery seldom handles.

4. Partial State Control (collectivized industrial control)

The state runs all essential services such as utilites (water, power, etc.) and public services, such as hospitals. Other goods and services are in the hands of the citizenry in the form of collectively owned ventures. Citizens run businesses as group cooperatives, with profits being shared out between contributing members through an agreed profit-sharing scheme. Business ventures must follow government guidelines.

5. Partial State Control (private industrial control)

The state controls all vital services (utilities such as water and power, hospitals, etc.). Other goods and services are in the hands of the citizenry in the form of privately owned ventures. Individual citizens may enter into entrepreneurial ventures for their own personal profit. These private ventures must follow state guidelines for such.

6. Limited State Control (collectivized industrial control)

State control of goods and services is limited to providing set guidelines under which these services must operate. The actual production of goods and services is left in the hands of collectives of private citizens, who operate such ventures for personal profit. Citizens run these businesses as group cooperatives, with profits being shared out between contributing members through an agreed profit sharing scheme.

7. Limited State Control (private industrial control)

State control of goods and services is limited to providing set guidelines under which these services must operate. The actual production of goods and services is left in the hands of the private citizens, who operate such ventures for personal profit.

8. Collectivized Control

The government has no control over the production of goods and services, leaving this entirely in the hands of collectives of private citizens, who operate such ventures for personal profit. Citizens run these businesses as group cooperatives, with profits being shared out between contributing members through an agreed profit-sharing scheme.

9-A. Private Control

The government has no control over the production of goods and services, leaving this entirely in the hands of private citizens. All production is organized and owned by private citizens for their own personal profit.

OWNERSHIP OF GOODS AND CAPITAL

The ownership of property and the control of capital can be controlled by the state, owned privately, or can be administered by a combination of the two.

1. Private Ownership

Private citizens may own goods and capital outright. Governments also own property (usually major utilities services), which they hold in trust as "public property."

2. State Supported

Private citizens may own goods and capital outright. Expensive items are often owned by the state, and citizens may lease the right to use them (cash payment or pledged future work or services commitments).

3. Total State Ownership

All goods are the property of the state. Citizens are granted the use of these goods at need (possibly conditional on work or service commitments), but the government has the final say on their use and distribution.

DISTRIBUTION OF GOODS AND SERVICES

Goods and services might be provided to the population on a number of different bases. Citizens might have to work for a living, paying for such basic necessities as food and lodging, or the state might provide minimal amenities (wages might become lower to compensate for this).

The "obligations" or "contributions" required for access to goods and services might vary widely. They could include cash payment,

pledged future work, or even indentured servitude! Conditions will vary depending upon the required services, and the local character.

0-1. Little or No Access

Individuals are not entitled to any free goods or services. Each individual is totally responsible for his own upkeep and survival.

2. Limited Access

All citizens will have to work in some way in order to support themselves, but the state will subsidize and support special cases. Public health and free low quality food/housing are provided by the state.

3-4. Substantial Access

All of a citizen's basic needs are cared for by the state. Basic amenities are provided by the state with no obligation to the citizen. Citizens may acquire more extensive access to goods and services by entering into an obligation with the supplier (e.g., offering cash payment, pledging future work, etc.).

INDIVIDUAL ACCESS TO INFORMATION

This lists the amount and type of information access available to the critter in the street. Public access to education, the media and net facilities will tend to vary from world to world.

1. Virtually None

Citizens have access to a very limited store of information. Media news services all tend to draw their information from the same source, giving news a limited range of viewpoints and interpretations. There is no allowance for citizens to gain access to deeper current affairs information (other than that provided by the media for mass consumption).

The net is not easy to interact with, and few people will be able to contribute to the net. Open debate on the net is virtually nonexistent.

2. Restricted (state controlled)

The population has a certain amount of free access to information, but must pay for all information in excess of the minimal amount. The media is administered by the state, and current affairs reports all tend to draw their information from same state sources, giving a limited number of viewpoints on current events. Deeper research into current affairs (past the simple mass market news provided by the media) is difficult.

Citizens may choose to enter into public debate on the computer and media nets, but contributions pass through an editing process. Contributions frequently go unpublished.

3. Restricted (private media)

The citizenry has a certain amount of free access to information, but must pay for all information in excess of the minimal amount. Private and public media may or may not give the citizen a variety of different viewpoints and interpretations of events. Deeper research into current affairs is difficult.

Citizens may enter into public debate or contribute articles on the computer and media nets. Since these debate (or "magazine") nets are privately run, these articles will undergo an editing process, and some views might prove difficult to publish.

4. Free Access (state controlled media)

The citizenry has free and complete access to information through the media and the net. The media is administered by the state, and current affairs reports all tend to draw their information from the same state sources, giving a limited number of viewpoints on current events. Deeper research into current affairs is easily done by using the net to access more specific information (although this normally accesses the same sources from which the state media drew its information).

The local net is an active debating environment, where all citizens are free to contribute their thoughts and feelings, and their opinions on current affairs.

5-6. Free Access (private media)

The population has free and complete access to information through the media and the net. Private and public media give the citizen a variety of different viewpoints and interpretations of events. Deeper research into current affairs is easily done by using the net to access more specific information. Education is supported by public funds.

The local net is an active debating environment, where all citizens are free to contribute their thoughts and feelings, and their opinions on current affairs.

POPULATION MORALE FACTOR

This is used to describe the enthusiasm of the critter in the street for his society, and the level to which locals tend to involve themselves in political events.

1. Discontent

The typical citizen hates the government, and holds its actions in contempt. There is likely to be a limited amount of anti-governmental political activism behind the scenes. Locals might feel actively concerned with contributing to their community, but not necessarily so.

Typical citizens will have an Antipathy of 1 towards their *government.*

2. No Interest

The population has no interest in the doings of the government, and has little enthusiasm for contributing to the community.

3-4. Little Interest

The populace seldom bothers about government decisions unless there is a major event, scandal or media campaign. There is a certain amount of political activism within society, but strong political involvement or community commitment is the exception for citizens rather than the norm.

5. Active Interest

The citizenry is very interested in political events and decisions, and political and social debates are closely followed. Citizens tend to have an interest in community involvement, and will actively contribute time and effort to their society. Citizens are educated to act responsibly, and to be aware of the long-term consequences of their actions.

Characters coming from such societies will have a level 1 Tie with their *homeworld government and society.*

6. Enthusiastic Interest

The populace has an overwhelming enthusiasm for community involvement. Political decisions are followed with interest, and the whole citizenry feels a commitment to assisting and maintaining their society.

Citizens are educated to act responsibly, and to be aware of the long-term consequences of their actions. All citizens are taught to take an active role in their society, and contribute as much as they can to the public well being. Careers with the military, the government administration and social services are highly respected.

Characters coming from such societies will have level 2 Ties with their *homeworld government and society.*

SECURITY

This is the attitude that the locals have towards close security monitoring. Depending upon the tech base, monitoring might include everything from simple police patrols to full surveillance at the hands of AI administered security systems.

1. Strongly Anti-security

The population is strongly opposed to the concept of security monitoring, seeing it as an invasion of privacy.

Locals will have an Antipathy of 2 towards *security monitoring* and a Tie of 1 with *personal privacy*. They will be quite touchy about intrusions into their personal affairs.

2. Anti-security

The populace views security monitoring with distaste, fearing the "police state" mentality that this implies. There is no security monitoring outside of military installations and high security areas.

Locals will have an Antipathy of 1 towards *security monitoring.*

3. Privacy Conscious

Security monitoring is seen as a necessary evil. The populace accepts a minimal security presence in public areas. There is no monitoring of private communications, dwellings or literature.

4. Security Conscious

Security monitoring is accepted. The average citizen feels that security is for the public protection. Local security is not thorough by cental ConFed system standards. Local opinion is wary of security monitoring being extensively used for psychological evaluation. The monitoring net does not extend much in the way of unsolicited psychological counseling to the public.

5. Pro-security

Security monitoring is part of day-to-day life. The average citizen feels that security is for the public protection. Monitoring unobtrusively extends into private quarters. AI-administered psychological and medical models ensure that counselling services and medical advice are extended to people who need them. Many social pressures and tensions are thus relieved before they can cause damage.

Weight the culture's *social responsibility* factor toward the high end of the scale.

6. Strongly Pro-security

Security monitoring is seen as a necessary part of maintaining social order, essential to the maintenance of a safe society. Monitoring extends into private quarters and communications. The administering AI net uses psychological and medical models to ensure that counselling services and medical advice are extended to people who need them. Many social pressures and tensions are thus relieved before they can cause damage.

Citizens assist the authorites as a matter of duty. People who obstruct or flee the law automatically admit their guilt.

Locals will have an Antipathy of 1 towards *lawbreakers.* They will also have an Antipathy of 2 towards *lax security monitoring.*

CLOTHING

People will always wear clothing appropriate to their environment. If it rains, then raincoats will be common wear. If it is hot, then clothing will be lightweight and brief. Likewise, some races never really wear clothes (e.g., avians) except for protection, badges of rank, social distinctions or pockets.

Attitudes towards nudity and body coverage among mammals varies widely from world to world. The following listings refer only to general public attire, and private wear can be much different.

1. No Nudity Taboo

The local culture is not particularly worried about nakedness in public. In hot weather, in air conditioned places or when bathing, the locals will often wear only shorts (for the convenience of pockets) or nothing at all. The concept of nudity is not automatically linked with sex. The local populace has no embarrassment with any normal bodily functions, and no shame of their bodies. If combined with easygoing or open minded sexual codes, then local swear words will make little reference to bodily functions.

2. Limited Nudity

While clothing is commonly worn on the street, there are times or places where public nudity is not an issue, or may even be appropriate when connected with a particular situation or event. As local custom imparts a custom to nudity, inappropriate nudity might cause confusion or embarrassment, but not necessarily a direct connection with sex.

3-4. Nudity Taboo

Clothing is always worn in public, and public nudity causes shock, alarm or embarrassment. The concept of nudity is inextricably linked with sex.

5. Well Dressed

The typical citizen dresses carefully whenever he wishes to appear in public, and tends to coordinate clothes into outfits. Typical street dress is quite complex and can be expensive. Clothing is always worn in public, and public nudity causes shock, alarm or embarrassment. The concept of nudity is inextricably linked with sex.

6. Complex Clothing Code

The local population treats the wearing of clothing as an art, and clothing is a recognized form of communication. Choice of color, cut or ornament will tell the experienced viewer much about the wearer's family/clan, profession, status and even mood.

Clothing is always worn in public, and public nudity causes shock, alarm or embarrassment. The concept of nudity is inextricably linked with sex.

FAMILY LIFE

The raising of children and typical "home life" will tend to vary according to species, although a nuclear family set-up is most common. Single parents are reasonably common in any culture, and full allowances are normally made for this. Military characters can have families just like anyone else, and pregnancy does not normally mean an end to a career.

An interesting phenomenon is the "care group", an artificial extended family designed to increase the support and care that can be given to a child. A care group is formed by a moral/social commitment between a group of individuals, in which they elect to share in the tasks of bringing up each others children.

1. Single Parent Orientation

A normal upbringing involves a single full time parent and a care group, which not only provides broad-based care, but allows the parent to be able to work away from home. Parent and children would reside together in their own living space. Alternatively, care groups might have communal accommodations or might share living space with each other.

2. Nuclear Family

The parents of children usually make a serious moral and social commitment to re-

main together and share the upbringing of their children. They form small family units, and reside together in their own living space. These family units may still often enter into care groups, particularly if both parents are working.

Locals will tend to have a Tie of 2 to their own *family* (they might dislike individual members, but this will be at odds with their own notions of duty or normal affections).

3. Limited Group Family

The parents in this case would be a polygamous group, usually a single male and several females, though not all of the females would necessarily be bearing children. Care for the children could either be collective or each to his own mother, depending on cultural norms. As social hierarchies within these families are common, Ties and Antipathies among the members could be very dynamic. When confronted by an outside issue, however, exceptionally strong Ties to the family would override interpersonal differences.

4. Extended Family

The parents of children generally make a serious moral and social commitment to remain together and share the upbringing of their children. The extended family will provide care for a child, and so two full-time parents are not essential.

The family and kinfolk of the parents will usually take a hand in the upbringing of the child, providing support, care and child minding. Families will often live near one another, or share living space.

Another aspect of the extended family setup is care for the aged. Older family members are usually cared for within the family, rather than having to find specialized accommodation/care facilities.

Locals will tend to have a Tie of 2 to their own *family* (they might dislike individual members, but this will be at odds with their own notions of duty or normal affections).

5. Extended Group Family

This is a polygamous group situation that also has additional members who subordinate their personal desires for procreation to provide support for the family. Most commonly, the group would have a male and several females who are the reproducing members and several other adults, who may or may not be kin, who help with the child-rearing and provide other services for the group. There is often a strong feeling against incest within these groups, and the help members would go outside the family for social sex or reproduction. The organization can be hierarchical or egalitarian, as personal preferences or cultural norms demand. While interpersonal Ties may vary, group loyalties are particularly strong.

6. Clan Organization

Normal extended family organization is expanded by affiliating related or allied families into complex *clans.* A clan acts as a support mechanism for its members, exerting influence and offering moral and financial support to the clansfolk.

Parents might or might not make a mutual commitment to raising their children together. In any case, the extended clan/family would provide support and care for a child, often including education or other institutional services.

Clan politics adds an extra dimension to any world on which a clan set-up exists. Clan reputation, influence and economics will be an important part of day-to-day life.

Inhabitants of worlds that have a clan system will have a Tie of 2 to their own *clan.*

SEXISM

Attitudes towards the equality of the sexes tends to vary widely from world to world. Many ex-colonies have gone through a period where breeding females have been precious, and these cultures tend to be overprotective of their "delicate" female population.

1. Segregated Society

Women and men have clearly segregated roles, which they are socialized into from an early age. Deference towards women has given them their own clearly defined areas of power. They are by no means pawns or second class citizens.

The power that females wield will vary depending upon the other elements of the culture. For example, in a clan set-up, the women could control the clan influence.

2. Overprotective

The society has definite ideas of what is appropriate for either sex, and socializes its members into acceptance of these sex roles. Although women are not prevented from entering any sort of career, they will find it difficult going to make do in areas which are seen as inappropriate for females.

Women are often expected to give up their careers once they have children, but are not actively encouraged to do so (except through social pressure). There are seperate facilities for males and females, and women are treated with an extra level of politeness by their male counterparts.

3. Protective

The culture has definite ideas on what is and isn't appropriate for either sex. Although ostensibly equal, both sexes are socialized into finding some roles appropriate or inappropriate.

Seperate facilities for women and men are the norm. Males will often politely defer towards females, based on the subconscious assumption that women require extra help. This is seen as an essential element of local manners–failing to defer in this way can be seen as being rude. Pregnant women are given every opportunity to continue with their careers, but are often socialized into leaving their work to devote the maximum time to their children.

4-6. Deferential

The local culture maintains a facade of absolute sexual equality. Men and women maintain active roles in all levels of society, although women are often naturally inclined (or are socialized) into avoiding combat oriented jobs. There is an unspoken social consensus which finds some jobs (such as combat-oriented ones) unusual for women.

Seperate facilities for women and men are the norm. Males will often politely defer towards females, based on the subconscious assumption that women require extra help. This is seen as an essential element of local maners–failing to defer in this way can be seen as being rude. Pregnant women are given every opportunity to continue with their careers (as limited by their own needs and restrictions).

7-A. Equal Society

The local culture maintains absolute sexual equality. Men and women maintain active roles in all levels of society, although women are often naturally inclined to avoid combat-oriented jobs.

The needs of women are well cared for, but segregated facilities are not normal. Pregnant women are given every opportunity to continue with their careers (as limited by their own needs and restrictions).

ACCENT

Accents vary from world to world. Time, distance and original population base will all influence the development of local colloquialisms and pronunciation. On the inner ConFed worlds, the local version of standard can be so far removed from the original tongue as to seem an alien language. Secondary and tertiary colonies will not have had the time or isolation to develop local vernacular to this extent, but local language forms can vary widely from the norm.

Remember that all people can still switch to stock pure standard at need.

1-2. Pure Standard

The population speaks pure standard. Possibly the population came from a diverse set of population bases, and uses the unchanged original standard through agreement. This does not mean that individuals might not have accents inherited from their ancestors.

3-4. Localized Slang

The local population has been integrated for long enough to develop its own particular colloquialisms. Their language is still pure standard, but they now have their own particular phrases and oaths. Visitors might find themselves confused or amused by local terms.

5. Picturesque Accent

Although the locals speak pure standard, they have developed a pronounced accent which makes their speech patterns unique. This will combine itself with unusual colloquialisms to make the local speech very different from mainline standard.

6. Heavy Accent

The local population has made major changes to the normal pronunciation of standard, perhaps even changing the basic sentence structure. Germanic style sentence structure, odd phrasing, etc. could all add color to local speech. Local speech is still understandable once the listener is used to the new form.

Outer ConFed worlds which have this level of linguistic shift will have largely taken their initial population base from a single inner ConFed world.

SPECIES RANGE

Some worlds are not inhabited by the full range of species found in known space.

1-8. Non-specific

Most species are represented on the world. Some minor species might be missing. The higher the dice roll, the more minor species are lacking (e.g., on a roll of 7 or 8 some entire species groups will be conspicuously missing, such as Avians).

9. Species-specific

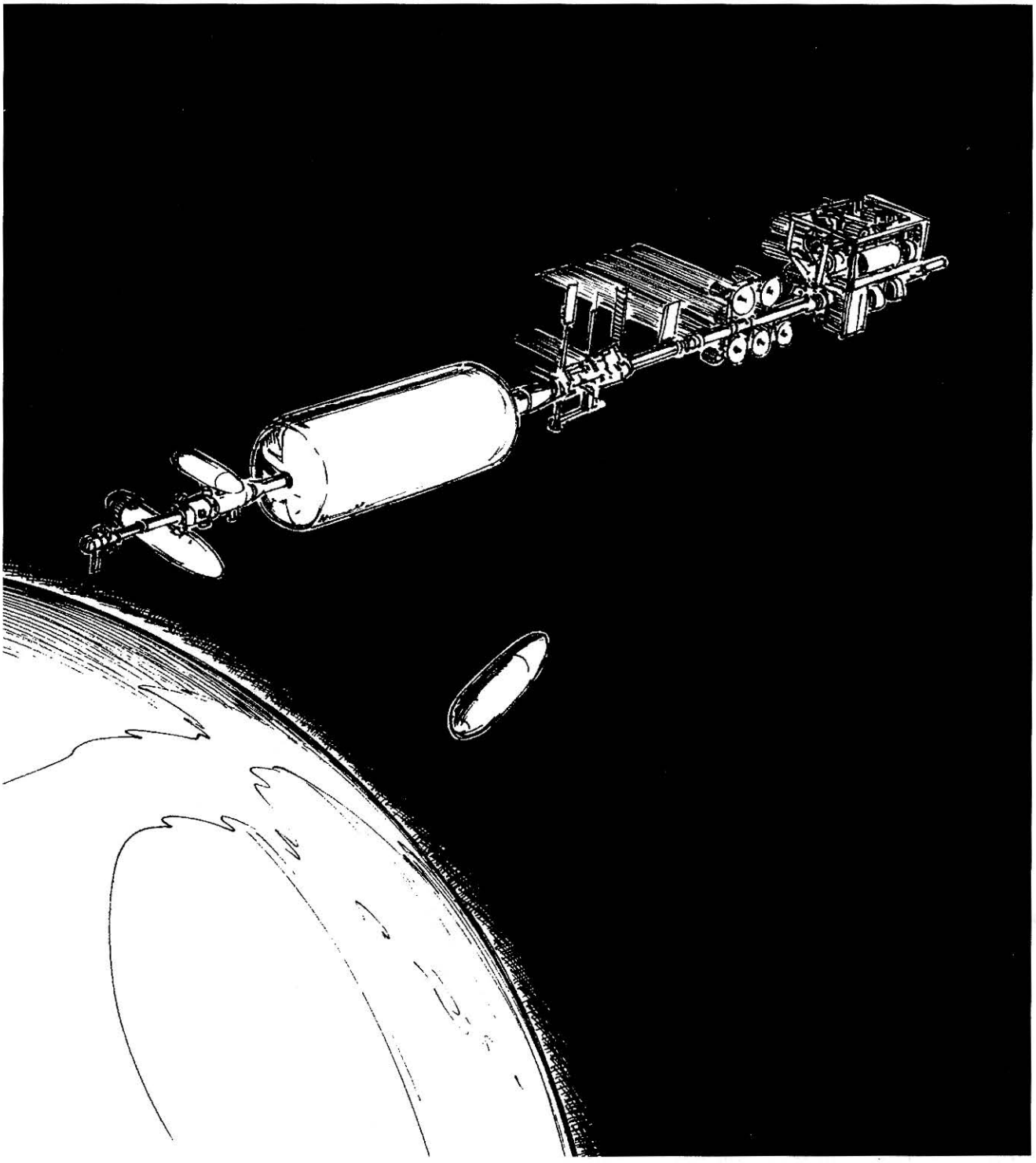
The world is largely the habitat of a single race (e.g., Rabbits). The colony might have developed in this way because of bigoted viewpoints, or the region might simply appeal to certain species types. Characters from such worlds might have Antipathies towards the members of other races (or at least a Tie to their own race).

Visitors of species types not represented on the planet will be objects of interest to the locals.

A. Species group-specific

The world is largely the habitat of a single species group (e.g., Rodents or Avians). The colony might have developed in this way because of bigoted viewpoints, or the region might simply appeal to certain species types. Characters from such worlds might have Antipathies towards the members of other races (or at least a Tie to their own race).

Visitors of species types not represented on the planet will be objects of interest to the locals.



Tashtan Station (artist's conception)

TASHTAN STATION

An Albedo Adventure

Tashtan station is a "whodunit" designed for one to three players. The player characters are all civil or EDF authorities who have come to supervise and liaise with the directors of a zero-G construction site in high orbit about the planet Tashtan.

BACKGROUND

Tashtan is a small colony world that hopes for a great future. In an effort to gain financial independence from its mother world of Zath, the Tashtanii government has poured funds and effort into the construction of an orbital dockyard facility. It is hoped that an orbital facility for the servicing, construction and repair of interstellar vessels will bring trade to the system. To this end, developments on the planetary surface have been sacrificed so that the orbital construction project can be given first priority.

ConFed sponsorship has been requested, and the EDF has agreed to assist in funding the project, pending a settlement on the use of the facilities by ConFed armed forces. The EDF will provide capital and construction equipment, but only if the orbital facility assumes a permanent role in resupplying, servicing and constructing vessels for the EDF.

While the Tashtanii government is keen on the idea, certain elements of the populace are less than happy about a permanent EDF presence hovering over their planet.

Another element that is less than pleased with Tashtan's orbital construction project is a clandestine alliance of outsystem business interests. These companies do not wish to see trade come to Tashtan. Indeed, they sincerely hope that the world will plunge itself into deeper financial trouble. These companies will then buy the colony's debts and effectively become the owners of the planet.

Insidious little plan, isn't it?

To this end, the companies have hired a saboteur to destroy Tashtan's orbital station before it can come into use. Unknown to anyone but himself, this saboteur is possessed of a psychelectromagnetic talent, a small talent that allows him to modify the awareness of people and electronic brains. (Note: This talent is extremely rare; it is virtually unknown to most people, and is not likely to happen again.) With this talent, the agent can suppress awareness or seal off data within an organic or electronic brain. He is currently ensuring that the station will fly apart once put under spin, and is suppressing the computor monitors that would normally detect his activity or alert the staff to the faults. He has begun to kill the few people aboard the station that could threaten his project.

PLAYER CHARACTERS

The player characters must have some reason for being aboard the station, but should not have too intimate a knowledge of the station or its personnel. A perfect set-up would be for them to be EDF liaison personnel newly arrived in the system to inspect the construction work.

For a bit of fun, it can be nice to throw something in the works by giving different player characters secret information. For instance, one might be in touch with the Net, while another might have shady connections or political beliefs that might conflict with mission objectives. It can all add to the fun!!

NPC'S

In addition to about 300 construction workers and miscellaneous clerks, supply men and technicians, the orbital site is home to the following notable residents. All personnel are skilled in zero-G movement and basic safety procedures.

Janno Faren
(suspicious architect)

Race:	Musteldid (Weasel)
Sex:	Male
Disposition:	Devious, Conceited
Strength:	8
Stamina:	10
Manual Dexterity:	10
Coordination:	12
Reason:	12
Intuition:	8
Drive:	12
Stability:	10

Skill areas: Computer Ops, Structural Engineering, Zero-G Architecture, Zero-G Movement.

The architect of Tashtan station, Janno is a secretive, pompous, oversensitive character. He rarely communicates with subordinates, nor does he socialize well. Although he is an excellent designer, he grates upon the nerves of all he meets.

Janno is unhappy about the presence of EDF on his station, and does not want a military tie-in with his project. He will react to ConFed characters with hostility.

Garwent Aeosha
(ambitious administrator)

Race:	Avian (Duck)
Sex:	Male
Disposition:	Greedy, Cautious
Strength:	5
Stamina:	10
Manual Dexterity:	12
Coordination:	12
Reason:	10
Intuition:	10
Drive:	13
Stability:	10

Skill areas: Admin, Assess Personality, Bargaining, Computer Ops, Forgery

Garwent is the administrator of the station, and a shifty individual if ever there was one. He is suspicious of any ConFed characters who come onto his facility, but will greet them with a false, oily friendliness.

Garwent is involved in some minor embezzlement (therefore his paranoia). He will keep careful surveillance on any EDF types who come aboard the station, and will guard his doctored computer files with great skill.

Minister Keeso
(ineffectual politico)

Race:	Rodent (Gopher)
Sex:	Male
Disposition:	Talkative, Generous
Strength:	7
Stamina:	7
Manual Dexterity:	10
Coordination:	9
Reason:	9
Intuition:	13
Drive:	12
Stability:	13

Skill areas: Administration, Assess Personality, Current Affairs, Law, Political science, Public Speaking, Salesman

A loud but harmless politician who has come aboard the station to publicize the project. He is very keen on impressing ConFed or EDF delegates, and will try to be as helpful and hospitable as possible.

Like all politicians, he is shifty. If trouble starts (e.g., When the first murder occurs), he will try to keep the player characters from becoming involved. He does not want to scare investors away from the project!

Doctor Vorgetta
(brooding medic)

Race:	Canine (Dog)
Sex:	Male
Disposition:	Reserved, Responsible
Strength:	10
Stamina:	10
Manual Dexterity:	12
Coordination:	10
Reason:	14
Intuition:	9
Drive:	8
Stability:	9

Skill areas: First Aid, Medical, Psycology, Surgery

A taciturn but competent medical doctor, this character actually has a shady past. Once known as Doctor Pitr Chorko, he has assumed a new identity and is fleeing from his homeworld of Zho-Chaka, where he is wanted by local and ConFed authorities as a terrorist. As such, he will be extremely suspicious of EDF characters, and will avoid them at all costs.

Alicia Dekkis
(eager young female computer op)

Race:	Rodent (Rabbit)
Sex:	Female
Disposition:	Friendly, Reckless
Strength:	6
Stamina:	12
Manual Dexterity:	10
Coordination:	14
Reason:	10
Intuition:	10
Drive:	12
Stability:	11

Skill areas: Art, Assess Personality, Computer Ops, Computer Systems Engineer, Electronics, Spin Yarn

Young, cheerful, and somewhat plain, Alicia will be more than happy to befriend strangers: Alicia could prove to be a valuable ally, since she has top access to security files and knows the station's robots and computers better than anyone else. She intensely dislikes Katje Lattri.

Katje Lattri
(sullen computer op)

Race:	Canine (Fox)
Sex:	Female
Disposition:	Conceited, Exacting
Strength:	7
Stamina:	10
Manual Dexterity:	10
Coordination:	12
Reason:	10
Intuition:	8
Drive:	13
Stability:	8

Skill areas: Computer Ops, Computer Systems Engineer, Dancing, Electronics, Musician, Philosophy

Absolutely, heartbreakingly beautiful, Katje is the local "ice queen": cold, arrogant, and elegant. She will seldom condescend to speak with lesser mortals. For some reason, males seem to insist on falling in love with her. Katje couldn't care less, but sometimes strings a suitor along for a while before letting him crash.

This character could be a prime suspect. It can also be fun to have a player character fall for her!

Gerterhard Gyff (construction crew manager)

Race:	Ursoid (Panda)
Sex:	Male
Disposition:	Straightforward, Responsible
Strength:	16
Stamina:	9
Manual Dexterity:	9
Coordination:	7
Reason:	12
Intuition:	8
Drive:	10
Stability:	13

Skill areas: Computer Ops, Demolitions, Electronics, Operate Heavy Machinery, Structural Engineering

A calm, competent engineer, Gerterhard keeps very much to his own counsel. He never indulges in gossip or rumor mongering, and has little patience for those who do. A difficult character to pump for opinions, Griff will usually refrain from making comment until he has first hand experience of the topic. When he suspects that there may be structural faults within the station, he goes off to inspect at first hand rather than sharing his suspicions with anyone else.

Reeka Lahti (environmental manager) Eeepi Lahti (a furry little baby)

Race:	Marsupial (flying possum: "sugar glider")
Sex:	Female
Disposition:	Talkative, Friendly
Strength:	7
Stamina:	8
Manual Dexterity:	10
Coordination:	14
Reason:	8
Intuition:	12
Drive:	10
Stability:	6

Skill areas: Assess Personality, Bargaining, Biology, Ecological Science, Ecological Systems Engineer, Poetry, Snitch, Socio-history

A true chatterbox, Reeka is a prime source of gossip, rumor and jokes. She keeps a constant ear to all the latest news, and delights in passing it on. Reeka is not malicious, and will often edit hurtful information.

An attractive lady, Reeka has an infant daughter called Eepi. Eepi is about five months old, and is confined to her mother's pouch. She is quite a sweet little rug rat, all wide eyes and soft fur. Reeka usually works while her daughter snoozes away in her pouch.

Reeka is a flying possum. She has a prehensile tail that can be used for grasping handholds and which acts as a handy anchor line. She also has flaps of skin that stretch from wrist to ankle on either side of her body. With these, she can modify her flight path when performing zero-G maneuvers in an atmosphere.

Jo-Beth Jho
(gorgeous media personality)

Race: Feline (Cat)
Sex: Female
Disposition: Amorous, Devious
Strength: 5
Stamina: 9
Manual Dexterity: 12
Coordination: 14
Reason: 12
Intuition: 12
Drive: 12
Stability: 12
Skill areas: Assess Personality, Bargaining, Current Affairs, Mingle, Public Speaking, Repartee, Snitch

Suave, sexy and shimmering with charisma, Jo-Beth Jho is a media personality from the Tashtanii media nets. She is on location to cover the story of the orbital station's construction and opening.

Jo is simply exquisite. Cute and elegant, she has an unnerving habit of undressing men with her eyes as she talks. Even so, she would never indulge in "extracurricular activity" unless it was for a purpose (e.g., to gain a scoop or a promotion). She would never keep a story secret, and mercilessly twists people to her advantage.

Gatu Liau
(media technician)

Race: Ungulate (Deer)
Sex: Male
Disposition (surface): Friendly, Cautious
Strength: 10
Stamina: 11
Manual Dexterity: 9
Coordination: 11
Reason: 10
Intuition: 15
Drive: 10
Stability: 8
Skill areas (on surface): Assess Personality, Camerawork/Photography, Current Affairs, Electronics, Mingle, Scrounge
Hidden skills (all at training level 12) include Demolitions, Detect Hidden, Handguns, Hide, Melee Combat, Sneak, Unarmed Combat

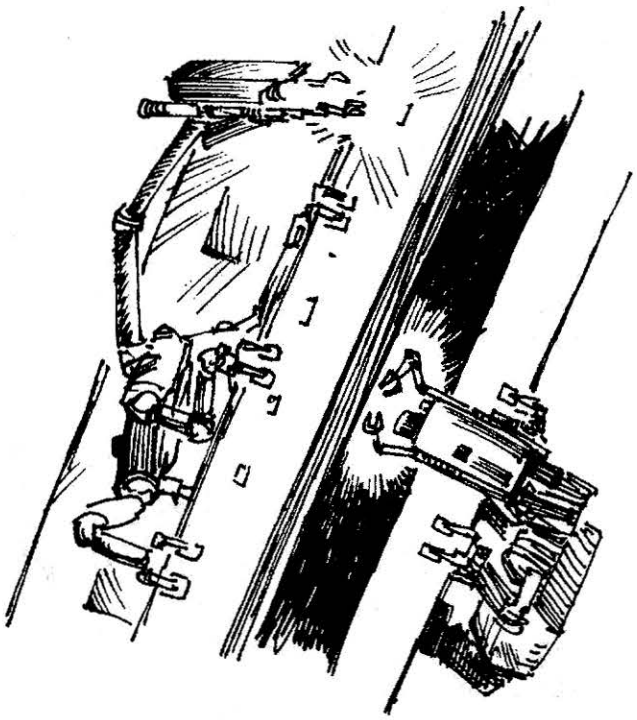
The saboteur! A pathetic figure who seems crushed by Jo-Beth Jho's brutal schedule, Gatu struggles with a massive workload. Although uncomplaining, he is pathetically grateful for the help of player characters. So much for the mask he shows to the world. In reality, Gatu is a vicious assassin. Amoral and utterly

without remorse, he has been responsible for a number of ruthless acts of sabotage and terrorism. His services do not come cheaply. He enjoys his work. Gatu is one of the best.

Gatu has a very rare psionic talent which is largely unknown even to databases. He can suppress the awareness of organic and mechanical brains, effectively making himself invisible. This sort of effort is physically very tiring (becoming more so as he tries to deal with more and more people). Major efforts will utterly exhaust him. Gatu can also monitor the surface thoughts of people around him, as long as he is not too tired.

These psionics are very useful. He can mentally control robots and computers (as long as his concentration remains undisturbed). He can become "invisible." The only way to catch him is in a trap, or to encounter him when he has utterly drained himself from extended use of his powers.

Gatu is a very dangerous foe!!



THE STATION

The final form of Tashtan Station will be a central non-rotating spine surrounded by a revolving cylinder containing crew quarters, recreation facilities and work places. This final form will only be reached in the far future. For the moment, the plan is to produce a central spine with a thin rotating ring. The ring has living areas fitted along its circumference; they will form a basis for the eventual final cylinder shape.

Tashtan Station is still largely incomplete. The central spine of the station is effectively finished. The next stages will be to complete the habitat modules. Once this is done, the living space will be connected to the ring and the entire structure will be spun, and work will continue on the factory facilities in the central spine.

Currently the entire facility is under zero-G conditions, with the work crews living in temporary quarters in the station's spine. Muscle tone is maintained by compulsory excercise in the gym. There is a busy daily work schedule. The "zee gee" teams (men and robots) work around the clock to complete the framework of the station. These workers spend most of their day in vacc suits or inside small construction craft supervising and assisting with welding and extruding out in the vacuum of space. Other workers are busy inside the pressurized sections of the station installing fittings and electronics. Meanwhile, a sizable team of programmers and engineers supervises and coordinates the efforts of the construction robots, who are doing most of the actual work of building. There is a workshop that repairs and modifies robots. A programming and design department monitors the overall picture and assists the engineers and architects in their work. Every few days, new construction materials and relief personnel arrive from the planet below.

THE SABOTEUR

Gatu's plan is to make the station fly apart one it is placed under spin–a disaster that should finish the whole project! To this end, he has tampered with the architectural department's materials stress models on the computer (both on site and on the planet). Gatu has modified the original plans for the station to incorporate his special modifications, doctored the records of construction materials ordered, and all looks just as it should be. The ring structure and its connections to the central spine will not bear up to the strain, and will fly apart (not immediately, but eventually, and it will be calamitously sudden when it does occur).

The only people who could detect the faults are the station's architect and chief engineer. Gatu will see to it that these individuals suffer "accidents."

Murders

Gatu will get busy arranging the accidents shortly after the player characters arrive on station.

Murder #1

The station's architect, Janno Faren, will be inspecting the sitework out on the ring. All seems well, when suddenly his EVA pack flares and he rams himself into the side of the structure. His suit was punctured. The computer quickly took over his EVA pack and brought him into a pressurized area, but it was too late. Janno Faren had died of asphyxiation.

There are no indications as to why the architect suddenly fired his jets. Computer records show that he was calm and controlled. He had been unusually quiet in the hours before the accident, but had not given any indication of suicidal or reckless tendencies.

The real story? Gatu had picked up Janno's sudden suspicion of his sabotage plans. When Janno went out to inspect the work first hand, Gatu contrived to be in the main computer room along with the computer operators, Jo-Beth Jho, Garwent Aeosha and Minister Keesho. Gatu quietly took over mental control of the computers and thus took remote control of Janno's EVA pack. Exit one zero-G architect! The computer's awareness of these acts was suppressed. In the general confusion, no one noticed Gatu's fatigue (although security monitor records will show him to have been distracted and tired at the time the accident was occurring).

Murder #2

Next person on the hit list is Gerterhard Gyff. He will be found dead in his office. Gatu killed him when he began to perform a serious search of the station's plans and work records. Suppressing the awareness of the monitors, Gatu injected Gyff with a poison that induces death in a similar manner to a massive stroke. The first thing anyone knows about the death is when the computer suddenly notices his dead body.

The computer should have been aware of any emergency as it happened. No one can understand how the computer failed to detect Gyff's attack and alert the base's medics. The only explanation is that the computer itself is malfunctioning.

There are few clues. An intensive autopsy performed at medical facilities on the planet Tashtan could discover that Gyff was poisoned, but the orbital station's medical apparatus has no chance of discovering this. A detailed search of Gyff's computer time over the 24 hours before his death will reveal strange blank spots–sections of computer memory have been erased wihout trace....

Murder #3

This is a near murder, rather than the actual thing. If the action is slow, Alicia Dekkis can come under attack. Alicia will dive into the computer memory and discover that there are cleverly concealed "blank spots" in the security monitor memory–moments in which the computer's awareness of events has simply faded out. Alarmed, she will try to contact the player characters.

While on her way to the player characters (late, late at night), she finds that the main travel shaft is inoperable (my, how strange...). She takes an alternate route down a cramped, spooky little service shaft. What a surprise–the doors all close. What a surprise–there is a hiss of escaping air. What a surprise–one of the player characters just happens to be nearby and hears a frantic hammering on one of the hatches....

Gatu is watching everything on a monitor camera. Now the player character is right at the top of Gatu's hit list....

As usual, the computer knew nothing of any pressure losses or jamming of doors.

CLUES

These are few and far between! Gatu is very good at his job, although he is having to use his power rather too overtly on this mission. It will soon become obvious that someone is tampering with the computers somehow, without even the AI being aware of how it is done.

If an independent stress model is run to test the safety of the station's structure, it will prove to be unsafe. It will then become clear that someone has deliberately installed faked models in the station's and planetary engineering department's computer databases. People who have had access to both machines include the architect, the engineer, Jo-Beth Jho, and her camera crew.

Catching Gatu:

Eventually players should be led to conclude that Gatu is a likely culprit for the murders. This is where the fun starts.

Gatu Liau is very hard to catch. He can sense surface thoughts, evade monitors, and blank the minds of opponents. The net is aware of people that have such abilities. If quizzed, it can inform selected individuals of the existence of talents. It can instruct characters on methods which might help combat a "talented" individual.

- Characters can keep thoughts hidden behind a smokescreen of trivia (roll Drive vs Gatu's Drive to successfully perform this little trick).

- A simple trap could be set up. Beware of traps involving electronics, or that are under the eye of monitor cameras.

This task is going to require some ingenuity. Once detected, Gatu will try to kill anyone who suspects his existence or will make good his escape from the station, depending on the circumstances (remember that he is one hell of a smart operator). He should be defeatable, but players will have to work hard to do so!

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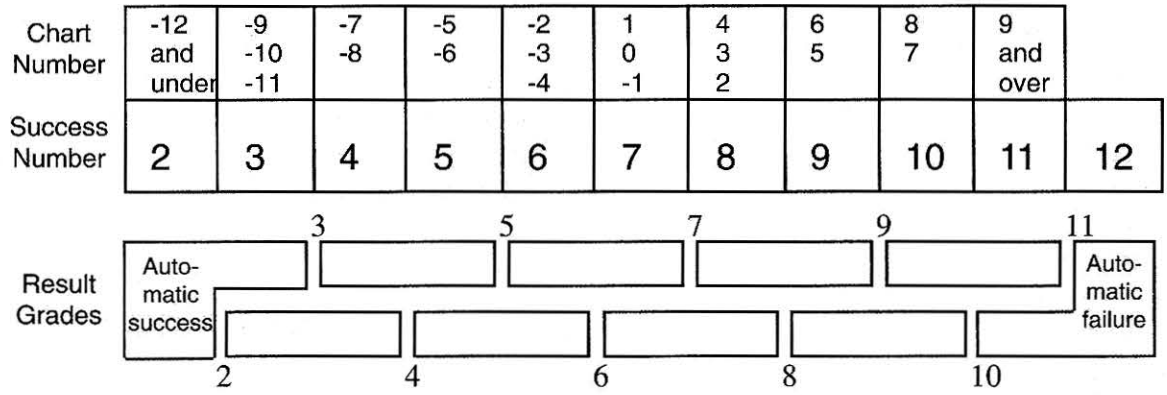
THE COMPARISON CHART



TASK DIFFICULTY NUMBERS

Very simple	0
Simple	5
Average	10
Difficult	15
Very difficult	20
Nearly impossible	25

CHART NUMBER MODIFIERS

For a Skill Task

Character has no skill	-5
Character has the skill	–
Character is adept at the skill	+5
Character is master at the skill	+10

For a Skill Challenge

As above and also:	
Opponent has no skill	+5
Opponent has skill, but attempting character does not	-10

For a Characteristic Check or Challenge

Character has expertise	+2
Character has great expertise	+5
Character has very great expertise	+10

For Encumbrance, Burden, and Fatigue

Penalty Level	0	1	2	3	4	
Encumbrance	0	-1	-2	-3	-4	Coord
Burden	0	-1	-2	-3	-4*	Coord+MDex
Fatigue	0	-1	-2	-5	-10#	All
						Cumulative

*Requires a Strength Check to carry item, or an Easy Strength Check simply to lift it.

#Requires a Drive Check to perform any action at all.

RESULT GRADES

(5)	Natural 2	"The Tops"
(4)	6 or more below	Excellent success
(3)	4-5 below	Very good success
(2)	2-3 below	Good success
(1)	Success Number or 1 below	Close success
(1)	1-2 above	Close failure
(2)	3-4 above	Bad failure
(3)	5-6 above	Very bad failure
(4)	7-8 above	Abysmal failure
(5)	Natural 12	"The Pits"

NOTE: A natural 2 is only "The Tops" if the Success Number is greater than 2. A natural 12 is only "The Pits" if the Success Number is less than 12.

ACTION SEQUENCE

		Phases in the Turn					
		1	2	3	4	5	6
"Actions	5	X	X		X	X	X
per	4	X		X		X	X
Turn"	3		X		X		X
Rating	2			X		X	
	1				X		

MISSILE WEAPON COMBAT CHARTS

RECOIL VALUES

Weapon	Recoil Value
4mm pistol	0
6mm pistol	0
8mm pistol	1
10mm pistol	2
12mm pistol	3
4mm longarm	1
6mm longarm	2
8mm longarm	3
10mm longarm	4
12mm longarm	5
Shogtun	4
Wild burst	+1

There is no recoil penalty for tripod-/bipod-supported weapons.

RANGE DIFFICULTY NUMBERS

Close	5
Short	10
Medium	15
Long	20
Extreme	25

ATTACKER MODIFIERS

Running	-5
Not taken aim	-8*
Taken aim (takes one action)	0
Careful aim (two actions)	+5#
Controlled burst	+2
Wild burst at close range	+5
Wild burst at short range	+2
Specific shot	-5
Indirect fire	-5

*Unaimed fire at long or extreme range will always miss.

#Careful aim cannot be used on a fast-moving target (sprinting/evading) or while using wild bursts or indirect fire.

TARGET MODIFIERS

Moving slowly (walking/running)	-2
Moving fast (sprinting/evading)	-5
Partially obscured	-2
Mostly obscured	-5
Large (e.g., vehicle)	+5

DAMAGE MODIFIERS

Weapon	
Carbine	+1
Grenade fragment	0
Machine gun	+3
Pistol	0
Rifle	+2
Shotgun	+3
Sniper's rifle	+3
Submachine gun	+1
Controlled burst (close/short range)	+1
Caliber	
4mm	-2
6mm	-1
8mm	0
10mm	+1
12mm	+2
16mm	+3
Range	
Short	0
Close	0
Medium	0
Long	-1
Extreme	-2

WEAPON BREAKDOWNS

Roll only if the Roll to Hit was a natural 12.

2d6	Result
2-6	no effect
7-10	stoppage: 1 action to clear it
11-12	jam: MDex check each turn to clear it. Two failures mean that special tools will be needed to clear the breach.

MELEE WEAPON DAMAGE MODIFIERS

Weapon	
Axe	+2
Bite	-1 (0 for carnivores)
Club	0-+1
Fighting stick	+1
Heavy knife	0
Kick	-1 (to lower body only)
Knife	0
Machete	+1
Pistol butt	0
Punch	-2 (+1 for hoof)
Rifle butt	+1
Wing buffet	-3
Target's Frame Size	
Small	-2
Light	-1
Average	0
Solid	+1
Huge	+2
Hit Location	
Head	+3
Chest	+2
Abdomen	+1
Leg	0
Arm	-1
Tail	-2
Attacker's Strength	
0-4	-4
5-9	-2
10-14	0
15+	+2

PENETRATION MODIFIERS

Caliber 10mm or greater	+1
Carbine	+1
Grenade	0
Knife	0
Pistol	0
Rifle	+2
SMG	0
Long or extreme range	
Dart ammunition	-1
Non-dart ammunition	-2

INITIATIVE MODIFIERS

Firearm Handiness

Rating:
- Very Handy 0
- Handy ..... -1
- Average ..... -2
- Cumbersome ..... -3
- Very Cumbersome ... -4

Drawing gun from holster ..... -2

Drawing longarm slung on back ..... -4

Character is running ..... -2

Wild burst ..... +1

Character has already taken aim .. +2

Melee weapon against longer melee weapon ..... -1

Melee weapon against firearm ..... automatic loss*

Indirect fire against direct fire ..... automatic loss

Following a leader who makes a Tactics Task or Challenge ..... +/- number of Result Grades

*Characters attempting melee against opponents armed with firearms will always lose Initiative unless attacking with surprise.

ARMOR PENETRATION RESISTANCE VALUES

	Pen.Res.	Imp.Dist.
Ballistic jacket	1	1
Ballistic vest	2	2
Battle helmet	3	2
Civilian vacc suit helmet	2	0
Flak armor*	3	3
Helmet liner	0	1
Hostile environment suit	2	3
ILR ballistic armor	2	3
Military vacc suit helmet	3/1/2#	3
Torso supporter	1	1
Vacc suit	2	1
Vacc suit liner	0	0

*Throat is protected if collar is done up.
#Skull/Upper face/Lower face.

MELEE COMBAT ACTIONS

Action	Challenge	Modifier	Cost*	Effect
Evade	(miss one action)	0	0	-2 to be hit
Grapple	Coord	0	2	Stops opponent's attacks and allows other actions
Strike, defensive	Skill	-2	1	Normal strike plus -2 to be hit in return
Strike, offensive	Skill	0	2	Normal strike
Strike, specific	Skill	-5	2	Nominate hit location
Throw object	Coord	0	1	Normal strike to 50+(Strx2)m
Trip	Coord	-7 (-2 if opponent larger)	2	Stagger
Actions while performing grapple				
Bear hug	Str	0 (-5 if opponent larger)	2	Causes 2 Fatigue injury
Bite	Melee (Unarmed)	+2	2	Normal strike (see page 105)
Break limb	Str	-5	2	Serious Impact Wound
Lock	Skill	0	1	Immobilizes; opponent drops weapon
Strangle	Melee (Unarmed)	0	1	Causes 5 Fatigue injury
Strike	Skill	+2	2	Normal
Throw	Melee (Unarmed)	0	1	Column 4 damage
Throw#	Str	0 (-5 if opponent larger)	2	Column 4 damage
Trip	Coord	0 (-5 if opponent larger)	2	Stagger
Actions while subject to grapple				
Escape grapple	Coord	-5	2	Grapple is broken
Grapple	Coord	0	2	Allows grapple actions
Strike	Skill	-5	2	Normal strike
Trip	Coord	-7 (2 if opponent larger)	2	Stagger
Actions while subject to lock				
Escape lock	Skill	-10	2	Lock is broken

*Fatigue Points per turn. These actions all cost Fatigue Points. At the end of each turn a character will lose Fatigue according to the highest of the costs (i.e., 0 to 2), not the total.

#Use this Throw only if the character does not have the Malee (Unarmed) skill.

VEHICLE COMBAT CHARTS

WEAPON RANGES

	Short	Medium	Long	Extreme	Indirect
Auto cannon	500	1000	2000	3500	
Beam weapon	1000	2000	4000	8000	
Grenade launcher	50	200	300	500	1500
Gun/Mortar	100	500	1000		5000
Hyperkinetic Guns	500	1000	3000	4000	
Machine Gun	50	200	300	600	
Machine Gun (heavy)	50	300	400	700	
Machine Gun (sustained fire)	50	300	500	800	

Auto cannon, hyperkinetic guns and beam weapons roll to hit using the "Dart Ammunition" column of the shot difficulty chart.

COMBAT MODIFIERS

Target is within 20 meters	-2
Target is large (light, high performance or heavy aeros, heavy GEV's, etc.)	-1
Target travelled at 40-60 kph this turn	+1
Target travelled at 61-80 kph this turn	+2
Target travelled at greater than 80 kph this turn	+3
Non-auto cannon/beam weapons vs moving aircraft	+2
Target is partially obscurred	+1
Firer moved during this turn	+1
Firer jolted by rough terrain, uneven going or landing	+1
Externally mounted MG's or GL's firing from moving vehicle	+1
Turreted arms firing in a phase in which the turret shifted its covered arc	+1

HIT LOCATIONS

Area Struck		Systems Contained	Compartment Affected
Ground vehicles			
Frontal hit:			
1-3	Turret*	Weapons	Fighting compartment
4-7	Hull front	Computer, sensors	Crew compartment
8-10	Suspension	Wheel motors	N/A
Side hit:			
1-2	Turret*	Weapons	Fighting compartment
3-4	Hull front	Computer, sensors	Crew compartment
5-7	Hull rear	Power plant	Crew compartment
8-10	Suspension	Wheel motors	N/A
Aerodynes (frontal hits use a DRM of -2)			
1	Forward fuselage	Weapons, sensors	N/A
2-3	Cockpit	Computer	Cockpit
4-5	Power compartment	Fusion power plant	N/A
6-7	Thrust vents**	Thrust vents	Cargo compartment
8	Fuel tank	Hydrogen fuel	Cargo compartment
9-10	Main fuselage	N/A	Cargo compartment

*A roll of 1 is a miss if the target is of "Low Profile" turret configuration.

**Hit locations 6 and 7 on helicopters counts as hits to the rotor assemblies.

VEHICLE COMBAT CHARTS

DAMAGE EFFECTS

Graze: Roll a sturdiness check for one random system noted as being present in this hit location.

Light: Roll sturdiness checks on all systems noted for this hit location on the hit charts, and each crew member present in the compartment must save versus wounds.

Serious: Complete compartment destruction. All characters in the stricken compartment must roll a save versus wounds. Roll sturdiness checks on all systems noted for this hit location on the hit charts. All characters must roll a Coolness under Fire check in order to perform any actions other than bail out next turn.

Massive: Vehicle blows up. All characters roll a save versus wounds. Characters who fail to bail out will be burned in 1d6 locations.

Catastrophic: Vehicle blows up. All crew must make saving rolls to avoid wounds. Characters who fail to bail out will die.

ARMOR

Armor Type	Pen Res
Light composite	10 (front)
	8 (sides & rear)
	6 (suspension)
Heavy composite	14 (front)
	12 (sides & rear)
	10 (suspension)

STURDINESS CHECK MODIFIERS

Vehicle Damage	DRM
Graze	0
Light	+1
Serious	+3

The extent by which a sturdiness check is failed will determine the amount of damage caused to the stricken system (see chart on page 51).

CHARACTER WOUND SAVING THROWS

Roll on 2d6	Wound Caused	Fatigue Loss
2-5	No effect	–
6	Graze	1d3
7	Light wound	1d6
8	Serious wound	2d6
9	Massive wound	2d6
10	Catastrophic wound	2d6
11-12	Dead	!

CHARACTER WOUND MODIFIERS

Vehicle size DRM	+/- N
Character is wearing body armor	-1
Light vehicle hit	-1
Massive vehicle hit	+2
Catastrophic vehicle hit	+4
Serious starship hit in main cmprtmnt	+4
Character not in main compartment hit	-2

VEHICLE COMBAT CHARTS

STURDINESS RATINGS

Vehicle System	Sturdiness
Computer system	7
Aerodyne control system	8
Sensor	7
Ground vehicle power plant	8
Fusion power plant (used in aerodynes)	9
Suspension system (allow the vehicle to move)	
Wheeled	Number of wheels
Tracked	8
Hover configuration	7
Aerodyne thrust vents	1/2 the vehicle's structural value
Weapons	
Machine gun	5
Grenade launcher	5
Cannon	7
Gun	9
Hydrogen fuel tank	6

STURDINESS CHECK FAILURE RESULTS

Damaged System	Roll Failed by 1-2 Points	Roll Failed by 3+ Points
Computer	Computer shutdown	Computer shutdown
Hydrogen fuel	Vehicle forced down	Automatic "massive" hit
Power plant	Vehicle loses all power	Automatic "massive" hit
Thrust vents	Maneuverability downgraded (1/2 turn speed, 3/4 max speed, -3 maneuver rating)	Roll 1d6: 1-4 Vehicle forced down 5-6 Vehicle blows up in 1d6 turns
Weapons	Weapon destroyed	Automatic massive hit if weapon was gun, cannon, gun/mortar or grenade launcher
Wheel motors	1/2 turn speed, 1/2 max speed	Vehicle halted in place

Air vehicles which are forced down may be piloted in for a crash landing. Roll the pilot's skill versus 10 (or 15 in rough terrain) to avoid complete disaster.

SPACESHIP COMBAT CHARTS

COMBAT MODIFIERS

Condition	DRM
Ordnance hit from a pass attack	+1
Target's sensors or engines are knocked out (versus ordnance only) o r the target is stationary	+2
Target is severely damaged	+1
3-4 points of ship's ordnance committed to the attack	+1
5-6 points of ship's ordnance committed to the attack	+2
7+ points of ship's ordnance committed to the attack	+3

DAMAGE DETERMINATION

2d6 roll	Result
2-4	Light damage
5-7	Moderate damage
8-9	Severe damage
10+	Target destroyed

DAMAGE

2d6 roll	Damaged system
2-5	Ordnance (reserve)
6-7	Beam weapons
8-9	Point defence
10+	Ship's sensors

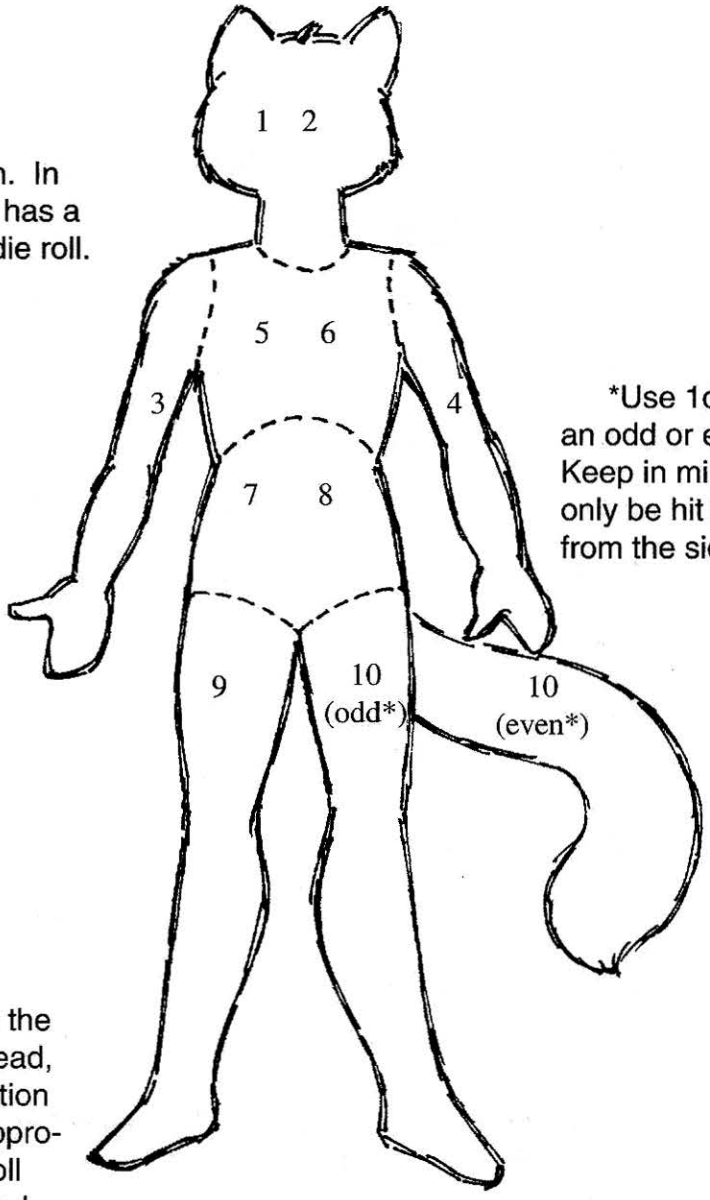
COMPARTMENT PENETRATION

1d6 roll	Compartment	Personnel Contained
1	Bridge	Pilot, navigator, gunnery chief
2	Auxiliary bridge	Backup bridge crew (the "second shift")
3	Engineering	Engineering/maintenance staff
4	Ship's services	Medical and administrative personnel
5	Weapons	Gunnery personnel
6	Cargo/passenger	Passengers, cargo, etc.

Ships which lack a particular compartment must roll again until struck in an area that they actually possess (e.g., fighters do not have a cargo/passenger compartment, and will roll again if a 6 is rolled for random compartment penetration).

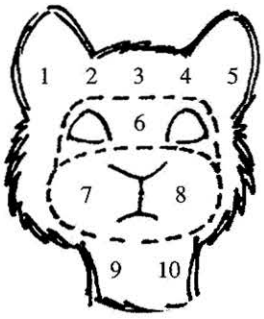
HIT LOCATION

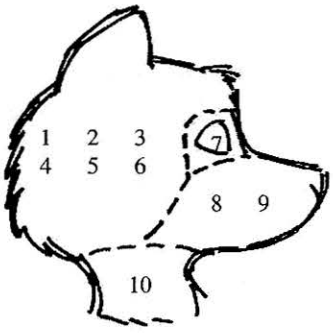
Roll 1d10 for hit location. In melee combat, if the target has a small frame size, add 2 to die roll.

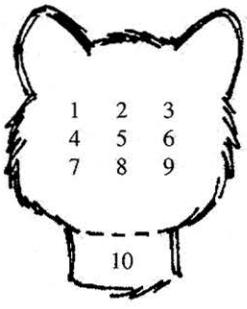


*Use 1d6 to generate an odd or even number. Keep in mind the tail can only be hit by attacks from the side or the rear.

If the die roll shows that the critter has been hit in the head, determine from which direction the hit came, consult the appropriate head diagram, and roll 1d10 for location on the head.







DAMAGE DETERMINATION

2d6 roll	Column 1	2	3	4	5
1	G/-	G/-	-/tm	–	–
2	G/tm	G/tm	-/tm	-/tm	–
3	G/st	G/tm	-/st	-/tm	-/tm
4	L/-	G/st	-/st	-/st	-/st
5	L/tm	L/tm	G/tm	-/st	-/st
6	L/st	L/tm	G/st	-/st	-/st
7	S/st	L/st	L/tm	-/st	-/st
8	S/kd	S/st	L/tm	G/tm	-/st
9	M/kd	S/st	L/st	G/st	-/st
10	M/ko	S/kd	L/kd	L/tm	G/tm
11	C/kd	M/kd	S/kd	L/st	G/st
12	C/ko	C/kd	M/kd	L/kd	L/kd
13	C/ko	C/ko	C/ko	S/ko	L/ko
14	C/ko	C/ko	C/ko	M/ko	S/ko
15+	C/ko	C/ko	C/ko	C/ko	C/ko

C: Catastrophic wound G: Graze L: Light wound M: Massive wound S: Serious wound
kd: knock down ko: knock out tm: tumble st: stun

Find the appropriate column

Column 1: Penetrating weapons (e.g., bullets, knives)
Column 2: Slashing weapons (e.g., teeth, shell splinters, machetes)
Column 3: Narrow point impacts (e.g., pointy end of fighting sticks)
Column 4: Impacts (e.g., punches, kicks, falls, explosions)

Note that Impact Distribution of armor will shift damage to the right one column per point of Impact Distribution on the affected part (if the armor was not penetrated). If this moves the damage past Column 5, then use Column 5 and apply a modifier of -2 for every further unit of column shift.

EFFECTS OF WOUNDS

	Modifier on Relevant Characteristic	Blood Loss (points per turn)
Grazes		
Shallow surface wounds or bruising.	-2	0
Light Wounds		
Painful but not disabling. Lose 1 fatigue/turn (recoverable) whenever moving or jolting the injured part.	-5	0
Serious Wounds		
Disabling. Lose 1 fatigue/turn (recoverable) whenever performing any action.	-8	1
Head: Recover fatigue at half rate		
Chest: Recover fatigue at half rate		
Abdomen: Cannot jump, run or sprint		
Leg: Cannot jump, run or sprint		
Arm: Drop any item		
Tail: Lose tail (kangaroo keeps tail; suffers as a leg injury)		
Massive Wounds		
Completely disabling. Take a Drive Check to perform any action. Lose 3 fatigue/turn (recoverable) whenever performing any action. Also lose one additional point of blood whenever performing any action. Recover fatigue at half rate.	-10	4
Catastrophic Wounds		
Even worse.		
Head: Killed instantly		
Chest: Killed instantly		
Abdomen: Killed eventually		6
Arm: Major fracture (as for Massive Wound)		6
Leg: Major fracture (as for Massive Wound)		10
Tail: depends on size (kangaroo suffers massive wound)		(8)

Note: Impact wounds (Column 4 or 5) only cause bleeding if the Roll to Hit was a natural 2. The bleeding is internal, and the maximum rate is 2/turn.

EFFECTS OF SHOCK

	Fatigue loss (once only)
Tumble: Staggered by the blow. Lose next action.	2
Stun: Dazed by the blow. Number of Actions per Turn halved for two turns and each subsequent turn until successful Drive Check.	4
Knock Down: Knocked off feet. Lose all actions for six phases, then continue as for Stun.	6
Knock Out: Lose consciousness for 1d6 turns and each 1d6 turns until successful Drive Check, then continue as for Stun.	8

VACUUM EXPOSURE DAMAGE

Breach to vacc suit	Fatigue Points lost per turn (recoverable)
Minor puncture	1/2
Puncture (e.g., bullet hole)	1
Tear (e.g., knife slash)	2
Major breach	3
Full vacuum	4

ADDITIONAL VACUUM INJURIES

Roll once only: Fatigue + 1d6

10 Light chest wound
11 Light head wound (ruptured eardrums)
12 Massive chest and head wounds
13 Serious chest wound and blinded
14 Serious chest and head wounds and blinded

FALLING DAMAGE

Height	1d6 injuries up to maximum	Damage on Column 4, modified
1 meter	1	-2
2 meters	2	0
3 meters	3	+1
4 meters	4	+2
8 meters	5	+3
16 meters	6	+5

BURN DAMAGE

Extent	Damage on Column 3
Mild	+1
Moderate	+2
Severe	+3

ALBEDO

Character Sheet

Player

Name

Critter Type

Frame Size

Disposition
Core

Inclination

STRENGTH		x 1/3 = Recoil Number		modified
STAMINA		x 3 = Maximum Fatigue Points		
MANUAL DEXTERITY		Current Fatigue Points		
COORDINATION		x 1/3 = Actions per Turn		modified
REASON		(REAS+INTU+DRV)/10 = SPI		
INTUITION		Initiative Dice		
DRIVE		x 1/2, x 1-1/2 = range of Self Image	low	high
STABILITY		Current Self Image		

WOUNDS*

		on
Encumbrance level*		on Coordination
Burden level*		on Coordination and MDex
Fatigue level*		on all characteristics

*All modifiers are cumulative.

FATIGUE TRACK

Keep position with a paper clip. Block out all boxes higher than Maximum Fatigue Value.
Divide Fatigue into six equal portions for Fatigue Levels 0 to 5.
Cross off boxes for non-recoverable Fatigue.

50
49
48
47
46
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3
2
1
DEAD

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CHARACTER BACKGROUND

SKILLS AND AREAS OF EXPERTISE

TIES

Strength of Tie

ANTIPATHIES

Strength of Antipathy

POSSESSIONS

NOTES

THOUGHTS & IMAGES T&I 8800

ALBEDO

THE ROLE-PLAYING GAME

Second Edition

The Albedo Role-playing Game is based in "Erma Felna, EDF", the feature story in the comic book *Albedo, Anthropomorphics*. It is a dramatic, "hard science" science fiction tale with the unusual twist of characters that are funny animals. The anthropomorphic character races are portrayed as races in their own right, rather than simply being people dressed in furry animal suits.

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Albedo's background material is notable for its well thought out technological base and the unique society it describes. The game includes details on languages and alphabet, social attitudes, and day-to-day life, as well as outlining dozens of different critter races. The abundant illustrations by Steve Gallacci, writer of the *Albedo, Anthropomorphics* comics give the reader a clear view of the universe of "Erma Felna, EDF."

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Dice needed to play: 2d6

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